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Can the South Compete with England?

One of the highest metallurgical authorities of England, Mr. Jeremiah Head, who visited the South in 1890 and again in 1894, has just made a report on the "Iron industry of Birmingham, Ala., with special reference to a possible competition therefrom in British markets," to the British Iron and Steel Institute. The main points of this report, which are given elsewhere in this issue, present a very strong showing for the South. Mr. Head admits the ability of Alabama to produce iron at a much lower cost than England, and that, notwithstanding all that has been accomplished, the iron trade of the Southern States is yet in its infancy as compared with its future. He believes that there is great prosperity in store for the iron and steel interests of the South, but he thinks that the growth of this business will more likely injure the Northern and Western iron trade than create serious competition with England. It is a striking commentary upon the South's position that the British Iron and Steel Institute should find it necessary to secure such a report and to carefully discuss the possible danger of Southern competition.

Gold-Mining in the South.

Probably no one in the South is more familiar with the gold-mining interests of that section than Mr. Wilkes, of the Mecklenburg Iron Works, of Charlotte. This company has for years made a specialty of gold-mining machinery, and controls the Theiss chlorination system, which has proved such a success at the Haile mine and elsewhere. The careful conservatism of Mr. Wilkes in regard to gold matters adds value to an interview in the Atlanta Constitution, in which he said:

We have had more inquiries in the last few months than ever before. There is no question about the interest in Georgia gold properties, and we look for great development in that line.

Prospectors are dropping in all the time. A great many have come here from Cripple Creek in the last few months, and all declare that if some of these Georgia properties were in the West, they would be valued at millions. All that is needed to bring the

North Georgia mines to the attention of the world is plenty of capital to work them and show that they pay. The pay ore is here in the ground in abundant quantities, enough to keep the largest plants busy for 200 years.

In the case of many property-owners, they have not the money to do anything more than to go down a few feet. From \$1000 to \$10,000 ought to be spent in developing a mine. Then if the pay ore is there in quantity the owner can command a good price for it.

These statements are confirmed by many others, and it does look as though the South is about to have a very marked increase in gold-mining.

The Nicaragua Canal.

The report of the majority of the House committee on commerce in favor of the Nicaragua canal deals with this enterprise from the financial and engineering standpoints, and particularly analyzes the report of the government board, of which Colonel Ludlow was chairman. The questions proposed for the board are said to have been the feasibility, permanence and cost of construction of the canal. The first two questions are said to have been definitely settled in the affirmative. The modifications of the company's project suggested by the board are said to look to results desirable at some future time, but which the company deem best to defer until the demands of commerce require larger accommodations, so that they may be accomplished when the canal is in operation and a revenue accruing to make the change less onerous. To have charged the railroad system of this country in its incipency with the cost of the heavy superstructure and equipment now in use would have been injurious. The deepening and widening of the Suez canal after its building is quoted as a precedent. The report impeaches the commission's estimate of unit prices of work on the canal by exhaustive quotations from statements of engineers. Whether the depth of canal and harbor shall be thirty feet at the outset, whether four locks shall be used instead of three, whether the water elevation should be 110 feet instead of 106, and other differences between the commission and the company, are said to be details depending upon whether the policy of making provision for all demands in all time to come is adopted.

Because of its testimony on unit prices, the report reduces the estimates of cost on the basis of the board's plans from \$133,000,000, and holds that \$100,000,000 will be an ample appropriation. Stress is laid upon the prospective benefits of the canal to the Pacific coast States and to the coal-mining and iron interests of the East.

In conclusion, the report says that the board of engineers have stated that they believe the canal entirely feasible, but differ with the engineers of the company as to the probable cost of the work. The advantages of the canal are so great that, the report says, the canal should be built by government assistance to the company, even if it costs over \$150,000,000.

The difference of opinion between the board of engineers and the engineers of

the company does not in any way affect the feasibility or practicability of the canal, nor lessen its importance to the United States. It is no longer a question whether the canal will be built, but as to who shall build it and who shall control it when built. The feasibility of the proposed interoceanic waterway has been fully demonstrated, and its importance and advantages to commerce have never been seriously questioned. Its consummation is inevitable, for its necessity is present and imperative, and when completed it will insure the safety and prosperity of the interests and industries of the American people.

Such, in brief, is a summary of this report. This great question demands prompt action of Congress. Of the value to this country of the canal it is needless to speak. We believe that it would annually add to the wealth of our country more than its entire cost, even if that should be \$150,000,000. Its construction would cause a marvelous advancement in the South and on the Pacific coast, and thus create great prosperity for these sections, without hurt to the Eastern States.

Seeking Immigration.

The presidential election year is the worst that could be selected for holding important expositions. We shall therefore have none in this country of special account this year. The Tennessee people have wisely deferred theirs until 1897, and the Southern exhibit at Chicago has been postponed indefinitely. All this was, under the circumstances, the wisest and best policy. There will be better times a year or two hence than there are now; more people will have the means to travel and to invest; the depression of the past three years will be changed to buoyancy and hopefulness. Then will be the time for the South, or those sections of it that desire immigration, to make concerted efforts to secure it. Meanwhile they can prepare for such concerted action by increasing the effectiveness of such agencies as have already proved of value, and by adopting systems for giving information about sections of whose attractions and natural sources of wealth little or nothing is known to the outside world.

A gentleman, long a resident of Minnesota, said a few days ago:

We have at last learned how to attract first-class immigration, and we are getting it. We did not worry about getting miners and lumbermen; they came quite as fast as they were needed. But we did want more farmers, and wanted them very much, indeed. There are in Minnesota 53,000,000 acres of lands, of which less than 7,000,000 are under cultivation. In a territory comprising 80,000 square miles we have but 1,500,000 people. We had largely relied upon the trunk-line railroads to bring us a rapid increase of population. They have done much in that respect, but nothing to what they might have done if conditions had been different from what they have been for several years. Last year our people, not only of Minnesota, but of the entire Northwest, awoke to the necessity of adopting a new and effective system for promoting desirable immigration. So last November a Northwestern Interstate Convention was held at

St. Paul, at which a plan was adopted, under which the Northwestern States were, respectively, to organize State associations, which, by working harmoniously, could each gain far more in every way than if working solely on its own account. Minnesota was the first to organize Statewise, but within a short time all the States represented at the general convention did likewise, and although but six months have passed since the movement began, its effects are already quite apparent.

In a debate in Congress last month one of the Minnesota representatives referred to this State immigration association, and explained its system. As soon as it was organized, with offices established at St. Paul, efforts were made to have appointed immigration committees in all the counties. On the first of April, of a total of eighty-one counties, sixty-eight had committees hard at work. Since January 1 many local conventions and mass-meetings have been held and a general interest aroused that has set everyone at work.

The following extracts from the official circular of the State association present its aims and the system it is employing for their accomplishment:

A cordial invitation is extended to the citizens generally to join hands with the members of the executive committee from their respective congressional districts, the county organizations, and with the secretary of the association, in the important movement to increase the population of the State by 100,000, the mark set by the president of the association to reach at an early day, and within a reasonable period of time to double the present number (1,500,000) of inhabitants of the State and aggregate a population of 3,000,000.

Every citizen of Minnesota is invited to send the names and addresses of friends and acquaintances living in other States, Canada or foreign countries to the secretary of the association at St. Paul, so that publications descriptive of the diversified resources of this great agricultural, stock-raising and dairying State can be mailed to them; also to request that their friends and acquaintances send the names of any intending settlers whom they may know.

Farmers are invited to prepare letters giving their practical experience in farming since their settlement in Minnesota; give the name of the town, county and State or foreign country from whence they came; the amount of means, stock, etc., which they had on arrival in the State; the means they now have, and the details of their progress in acquiring an independent home. It is the intention to print letters from farmers in the descriptive publications which are to be issued by the association in bringing to the attention of intending settlers the many advantages which Minnesota offers for new settlement.

As the agricultural lands and the timber and mineral resources of the State vary in localities, citizens are requested to prepare full descriptions of their respective counties and districts and send to the secretary at St. Paul for use in publications for distribution by the association. Include a description of the towns, manufactories, transportation facilities, public buildings, the number of churches, schools, population, the unoccupied lands and other opportunities for securing new homes.

It will be noted in the foregoing that the immigration association of Minnesota has adopted some of the methods introduced by the "Southern States," especially that particularly efficacious plan of giving settlers an opportunity to publish statements of their practical experience of life in Minnesota. But the comparatively novel features of

this organization are the methods employed to get the addresses of desirable settlers in this and in foreign countries, to whom documents can be sent, and its simplicity, economy and effectiveness, if rightly managed, to accomplish the ends desired.

If every Southern State would organize an immigration association that would have its active committees in every township, and follow out the general idea of the Minnesota association, the South everywhere would soon begin to realize its benefits in such a general inflow of first-class immigration as it has never received.

The town of Pratt, Kansas, has repudiated its bonded indebtedness. Pratt carries a bonded debt of \$76,000. The city administration decides that it is next to impossible for the owners of real estate ever to pay the bonded indebtedness. At the present time it is impossible for them even to pay the interest.—United Press Dispatch.

Had this occurred in the South, we should have seen a great outcry about Southern repudiation in hundreds of Northern papers and the folly of investments in this section. But as it happened in Kansas, where the East has so many hundreds of millions buried beyond the possibility of resurrection, it only receives the briefest kind of mention.

The Iron Industry of Birmingham and Bessemer.

[Extracts from a report made by Jeremiah Hend, M. Inst. C. E., to the British Iron and Steel Institute.]

By invitation of the president, I have prepared a short paper on the above subject, which for some time has been of great interest to makers and users of iron on both sides of the Atlantic.

The facts and opinions which I will endeavor to place before you are the result of two visits to Alabama, viz, in 1890 and 1894, and of much information since obtained from various sources.

Birmingham is 258 miles from Pensacola, 276 miles from Mobile, 475 miles from Charleston and 188 miles from Riverton, on the Tennessee river.

This river is the nearest navigable water. The distance from Riverton to the sea at New Orleans by water is over 1000 miles. It is obvious that Birmingham is handicapped as regards an export trade by its distance from the sea. The only circumstance which could make such a trade feasible would be exceptional advantages in the way of facilities for cheap production.

Price and Quality of Pig Iron.—In the month of April, 1895, just before the rapid rise of prices which characterized the following four months, pig-iron prices were low in every producing centre throughout the world, but especially so in the Alabama district. Several years of commercial depression had favored reduction of costs, as well as lowness of prices. No. 3 quality was actually sold at 24s. per ton on trucks, and a contract of 16,000 tons to 20,000 tons was offered at 28s. 6d. per ton f. o. b. Pensacola. One lot of 500 tons of forge quality was also offered by makers at 39s. 6d. ex ship Liverpool, and 250 tons were actually sent. The price of Cleveland (English) No. 3 pig iron at the same date was about 34s. 6d. per ton on trucks, or f. o. b. at makers' works, which is 10s. 6d. per ton in excess of the Alabama price on trucks, and 6s. above the f. o. b. price. The price at Liverpool for the 500-ton lot of forge quality was about 1s. per ton in favor of Cleveland pig (at 34s. f. o. b.) if sent by sea to Liverpool at a freight of 4s. 6d. per ton.

It has been suggested that the quality of Alabama pig iron is probably inferior to that of ordinary Cleveland pig iron.

But that is not so. The following comparative analyses of ordinary No. 3 may be considered fairly typical:

	Cleveland.	Scotch.	Alabama.
Si.....	1.75	2.16	2.5
S.....	0.10	0.04	0.05
P.....	1.50	0.85	0.70

They show that Alabama pig iron is superior to Cleveland in lowness of sulphur and phosphorus, and, in fact, about on a par with the best Scotch. In silicon it is higher, in the analysis given, but this can be greatly reduced, as will presently be shown.

The importers of the Alabama forge pig iron into this country, whom I asked for their experience as to its quality, wrote me thus:

"The quality of the iron is in every way satisfactory. We did not get a complaint from any user, and all who tried it are willing to make fresh purchases of the lots we are now bringing in. The iron is undoubtedly quite equal to the better class of Scotch brands, and is decidedly superior to Scotch store iron."

This report is just what might be expected from the above analysis.

In the month of May last year American pig iron, and, indeed, iron and steel of all kinds, rose rapidly in market value until the end of August, after which prices remained nearly stationary till the end of the year. Then a reaction set in, resulting in a gradual fall, until now they are only about 5s. per ton above the low prices of a year ago.

This difference is, however, enough to prevent any more being sent to Liverpool unless lower freights or higher selling prices can be obtained; and, indeed, it is clear that the minimum prices of a year ago are still too high to enable Alabama iron to compete on equal terms with cheap English iron at or near its place of origin.

Raw Materials and Labor.—The question which here arises is, how is it that pig iron can be so cheaply made at Birmingham and Bessemer cities? The reply is that suitable ore, coking coal and fluxes are there found in close proximity to each other, and in almost inexhaustible quantities. Also that the Southern climate favors the development of the negro population, which is well suited for the work of mining, smelting and iron and steel working, and which is cheap and easily managed.

Railway Rates.—It will no doubt not have escaped observation that the difference in price between pig iron on trucks at the furnaces and put free on board Pensacola, was only 4s. 6d. per ton. The distance being 258 miles, the rate amounts only to one-fifth of a penny per ton mile, supposing that there is no charge for putting f. o. b. For large quantities a rebate of from 20 to 25 per cent. has been allowed off even the above low rate. Such facilities enjoyed by Americans are in striking contrast with their absence here. Our heavy products have to pay from four to six times the above rates per ton per mile. Until last year Alabama pig iron was used almost exclusively for forge and foundry purposes. It had found its way to all parts of the United States, from California to Nova Scotia, and from the Gulf of Mexico to the borders of Canada; and also in small quantities to the Dominion, to Mexico, and a few other countries. The State to which the largest quantities were sent was Ohio. In Cleveland, Ohio, a city of 350,000 inhabitants, and 800 miles from Birmingham, it has been for some time in regular use in competition with pig iron made locally from Lake Superior ores and Pittsburg fuel. The railway rate from Birmingham is \$4 per ton, or 1/4d. per ton per mile.

Northern Steel Industry.—The great steel trade of the Northern States,

namely, Pennsylvania, Ohio and Illinois, was till last year based almost entirely on pig iron made from Lake Superior ores brought many hundreds of miles by steamer to the lake ports. This pig iron, about three-fourths of which is sufficiently pure for Bessemer acid treatment, had previously been the only material used for steelmaking in the United States.

According to statistics recently published by Mr. Swank, of Philadelphia, the total production of pig iron in the United States during 1895 was over 9,000,000 tons. Of this, the States of Alabama and Tennessee contributed approximately one-eighth, or, say, 1,100,000 tons.

The steel made in 1895 was, according to the same authority, over 5,000,000 tons; adding 25 per cent. for waste, 1,250,000 tons, the sum, 6,250,000 tons, represents the pig iron devoted to steelmaking in the United States last year. The remainder, viz, 2,750,000 tons, may be taken as what was used for foundry and forge purposes. Of this, about 37 per cent. was supplied from Alabama and Tennessee.

The iron trade of the Southern States is clearly (although in its infancy) a very important one. Its chief peculiarities are: 1st, that until quite recently it was used for foundry and forge purposes only; 2d, that much of it is now sent enormous distances by rail in order to find a market.

If a traveler went direct west from Washington to St. Louis, on the river Mississippi, and then northward up that river, he would leave on his right hand all the steel works at present in the United States except one small plant in Colorado. The rest of the country, comprising about five-sixths of the total area and above one-third of the total population of the States, is now, with the exception named, dependent on the North-eastern States for rails and all other steel products it may require.

Thus, if, say, cast-iron pipes were wanted delivered at Pittsburg they might be made at about equal cost from pig iron smelted there, or from pig brought from Birmingham with \$4 per ton railway carriage against it. If they were wanted at Birmingham it is clear that they could be produced there for \$4 per ton less than the cost in Pittsburg, or \$8 per ton less than the cost of Pittsburg pipes brought to Birmingham. If they were wanted at any point equidistant from Birmingham and the Northern iron district Birmingham would obviously have the advantage by \$4 per ton. Being able to compete with the Northern iron smelters at their own doors, the Southerners are able to dominate the rest of the country, more or less, according to the respective distances, for forge and foundry purposes. But the Southern ironmasters are not satisfied with this partial conquest. As we have already seen, over two-thirds of the pig iron made in the States is converted into steel. They ask, why should not the Southern iron be used for this purpose, and so dominate the South and West for all, and not for forge and foundry purposes only? The reply has hitherto been that it contains too much phosphorus for the acid processes, and only by means of basic-lined vessels can it be utilized for steel.

It will be remembered that Messrs. Thomas and Gilchrist's American patents were bought up at the outset by certain gentlemen connected with the steel trade of the North, and remained unutilized for years, until their expiration was near at hand. Now that they have expired, there is still only one basic Bessemer plant in the United States, and that is not a large one. But the basic

open-hearth process has become very popular. It is preferred by many steel-makers in the North, although there Bessemer pig is plentiful, and almost as cheap as non-Bessemer qualities. This is because it gives greater command of final results independently of the original condition of the materials. It enables impure pig and scrap to be freely used, while pure materials have still an advantage in proportion to their purity.

Proposed Southern Steel Industry.—The success of the open-hearth basic process in the North has not been lost upon the Southern pig-iron makers.

They could not be expected to rest contented and see their pig iron go 800 miles at a cost of \$4 per ton to be turned into rails, which should then be sent back at the cost of another \$4 per ton. The great desiderata for them evidently were—firstly, to satisfy themselves that their pig iron was of a kind which was capable of being made into steel suitable for rails, plates and structural shapes; and, secondly, to do the work of conversion at or near home, and so save the \$8 per ton. So far back as 1890 some 2000 tons of pig iron, guaranteed not to contain more than 1 per cent. of silicon, was made at a Southern furnace, and turned into steel in two basic open-hearth furnaces at the works of the Southern Iron Co. at Chattanooga.

The steel was good, but the circumstances were unfavorable, because the operations were intermittent and on too small a scale; commercial success was not achieved, and the experiment was eventually discontinued.

For the next five years, namely, until the summer of 1895, the commercial depression which overspread the United States prevented any progress being made in developing a Southern steel trade. Meanwhile, the open-hearth basic process had made great progress in the North, and bid fair to supersede acid processes altogether. The bad time had enabled the Southern smelters to reduce the cost price of their pig iron to the low figures already named, and to send their products to the very doors of their competitors in every State of the Union.

Their next move was to make a class of pig iron which should be specially adapted for the basic open-hearth process, and at a cost which should enable it to compete with Northern Bessemer pig iron as successfully as their foundry and forge qualities had done in the past. The basic open-hearth steelmakers demanded the following analysis:

	Per cent.
Si.....	1.0
S.....	0.05
P.....	0.8 to 1

A furnace near Birmingham was set to work to make this quality in September last, and during the next four months its product had reached 1200 tons per week, and averaged as follows:

	Per cent.
Si.....	0.42 to 0.73
S.....	0.026 to 0.036
P.....	0.69 to 0.76

As this result was well within the specified conditions, and as the cost price was no higher than that of ordinary pig iron, it is not surprising that the make was easily got rid of, and the furnace is still at work under the same conditions. This pig iron is cast in chills. It is probable, if not certain, that the Northern steelmakers have as yet used Alabama basic pig only to a certain extent in each charge, the remainder being made up of Northern Bessemer pig and scrap. If so, it is quite possible that difficulties might arise where it was the only pig used, and especially if scrap were scarce.

Be that as it may, a strong movement is now on foot to establish basic open-hearth steel works at Birmingham or Bessemer, and prove by actual practice

on a sufficiently large scale whether or not steel can be made there from indigenous materials. At Bessemer there is already in existence a heavy rolling plant. This, which cost originally £40,000, has been idle for years, and might without doubt be purchased and altered to fulfill modern requirements. The iron might be brought in the molten condition from two furnaces which are within 100 yards of the mills. There is an unlimited supply of excellent dolomite in the neighborhood, containing less than 1 per cent. of silica, plenty of cheap coal, and negro labor in abundance.

The Alabama ironmasters claim that in bad times they will be able to make and supply:

Basic pig (in ten if desired) at per 2240 lbs.,	25 0
Ingots	50 0
Blades	50 0
Rails	60 0

This expectation, if realized, would amount to about 4s. below the minimum price which British pig iron has reached for many years, and 5s. 6d. below the minimum price at works known for British rails.

The facts and figures which I have endeavored to place before you will probably have suggested to your minds another important question, viz:

Competition with England.—How is the development of the iron and steel trades of Birmingham and Bessemer likely to affect those who are connected with the same trades in Great Britain? Are we likely to see Alabama pig iron or Alabama steel competing commercially with our own similar products in British ports, or in neutral markets now dominated by us? Some Americans think this can and will be done, and some of our own countrymen are apprehensive that it will be.

Whilst, however, I fully recognize, and have endeavored to explain, the great natural advantages of the Alabama iron district in the manufacture of pig iron, and at no distant date in the supply of steel to all parts of the United States, I do not think that these products are likely ever to compete seriously with ours in our own or in neutral markets.

Conclusion.—In conclusion, I am inclined to believe that the great prosperity which is probably in store for the iron and steel makers of the South will come from supplying cheap iron and steel to the Southern and Western States, and perhaps Mexico. This development may possibly prejudice to some extent the interests of the Northern producers, who created and have so far retained the trade in question in their own hands.

But I feel confident that British iron and steel makers need be under no apprehension that their interests will be detrimentally affected, under any circumstances likely to occur in the immediate future, by the operations of their fellow-manufacturers of Birmingham and Bessemer, U. S. A.

New Orleans: The Place and People. By Grace King, with illustrations by Francis E. Jones. 400 pages. Macmillan & Co., New York city. Price \$2.50.

The name of the author is the assurance that the book is interesting. It is, however, more than this. New Orleans is a city whose past is teeming with stirring incidents. The writer has, with her usual charming style, worked in many of these, giving sidelights on the types of men and women whose personality and actions are inseparably associated with the history of the city. Written in narrative form, it is devoid of the dullness that would seem to characterize a book devoted to a single city. It is entertaining throughout, and imparts graphic impressions of a municipality which is unique among American cities.

Industrial News from Birmingham.

[Special Cor. Manufacturers' Record.]
Birmingham, Ala., June 1.

The iron market is in a state of quiescence, with a business so small that stagnation seems to be the word to properly characterize the situation. At a conference of three of the leading interests held ten days since it was determined to adhere to quotations, as the prospect for increased business from lowered prices was too poor to justify a departure from card rates. Last week we learned of a cut of twenty-five cents in No. 2 soft, then of twenty-five cents in all grades, and finally of a 50-cent cut. All this news came from Cincinnati. The combination, or "Gentlemen's Agreement," as it is sometimes styled, does not include all the furnaces here. But a cut by one interest must be met by the others if they would retain their business. It is stated that No. 3 foundry, quoted at \$7.25, was sold at \$6.90. The unsettled condition of affairs has induced some of the furnaces north of us to blow out, and talk is being revived of others following their example. The published schedule of prices, under the circumstances, is simply nominal and is omitted. At the Sloss works they are actively pushing the erection of their large blowing engine, which, besides very appreciably increasing their furnace output, minimizes the cost of production.

At a conference between the operators of coal mines and coal miners a schedule was agreed on to run one year, and to be in force from and after July 1. By its terms when No. 1 foundry iron sells at \$8.50 f. o. b. at furnaces, the miner's wage is to be forty cents per ton. For every advance of fifty cents in iron the miner's wage advances two and one-half cents per ton for coal until \$10.50 is reached for iron. Then, for every advance of \$1 above that, the miner's wage is advanced the two and one-half cents. At a meeting of the miners, resolutions were adopted to remedy existing evils in this State. They demand the abrogation of the convict lease system and its removal from the mines, as well as the abrogation of the check system. They demand the enactment of a labor lien law, and of an eight-hour-a-day law for the whole State. They also demand the enactment of a law prohibiting the employment of children in the mines. Reports from the mines indicate an improvement in condition that is gratifying to chronicle. The Pocahontas Company, whose property lies west of this city, is equipping its mines with the latest improved electric appliances both for light and mining purposes. One other, the Corona Coal Co., is so equipped. It is but a question of time when all the companies will follow the example of these leading corporations.

I have it from an unquestioned source that in a short time steps will be taken looking to the erection of a plant for manufacturing electric locomotives and all kinds of mining machinery. The parties back of it are men of means, and have plenty of enterprise and pluck. On the various enterprises these letters have mentioned as located here, work is progressing or being initiated. At the car-wheel works, but recently completed, they have been so busy that two visits resulted only in finding out they had no time to talk. By the end of this week they will probably be in full running order. As it is now, they have commenced operations in some of their departments. At the Hardie-Tynes Machine Co. they are building five engines on orders for the Sugar Country, besides other work for that district. At East Birmingham the foundry and machine company is turning out Corliss engines and heavy castings for the same interest. The Warrior Machine Works has booked orders which it

will take weeks to complete. These firms but index the general condition of our minor industries in iron, and it can be said of them, truthfully, that they are in a healthy condition. There are some movements being made concerning the steel mill which it is hoped will be matured in time for my next letter to mention.

J. M. K.

Increased Gold Production and Its Probable Influence Upon Business

The Manufacturers' Record has often pointed out the influence which the remarkable increase in gold production is likely to have upon the business interests of the world, and Mr. H. M. Chance, in discussing the same subject in the Engineering Magazine, calls attention to the great decrease in the cost of gold production as a reason for anticipating a general rise in values, inaugurating a period of business activity and prosperity. Mr. Chance says:

"The value of gold is fixed in the long run by the cost of production. At the present time its value—i. e., its purchasing power—is abnormally above the cost of production, having increased steadily for twenty years, although within the last five years the cost of producing it has rapidly declined. The tendency, daily becoming more apparent, to accept gold mining as an industry more promising of profits than other enterprises, is, therefore, in harmony with existing conditions.

"The price of no product subject to the influence of competition can remain permanently lower than the cost of production, for men will refuse to produce it for such price; and, conversely, the price of such product cannot be maintained at more than a fair margin over the cost of production, because many are always willing to produce and sell any product at the lower price.

"We may, therefore, safely conclude that the value of metals, as of other products, is fixed by the cost of production, and that all permanent changes in value arise from increase or decrease in the cost of production. Some metals, and other products, manufactured by secret or patented processes, and some natural products known to exist over comparatively small areas, which are controlled through combinations of the owners or by the sole ownership of an individual or corporation, are exempt from the influence of competition, which reaches only those products the production of which is open to all, and the output of which is limited only by the labor available for their production. * * *

"The wide distribution of the world's store of gold, its large volume, and the fact that it is held principally by those (both corporations and individuals) having no desire to part with it, but who retain it as a convenient medium for the investment of their surplus or otherwise uninvested wealth, prevent rapid changes in its value or purchasing power. Its fluctuations are correspondingly sluggish, the addition of a relatively small stream of cheaply-mined gold causing no immediate change in the value of the great mass with which it unites. But as the volume of this stream is steadily and rapidly increasing, the purchasing power of the whole mass ultimately must recede, until it rests at the level of the cost of production, wherever that level may be found.

"The closure of the mints of the most wealthy nations to silver, with the corresponding increased use of and demand for gold, assist in maintaining gold abnormally above its value as determined by the cost of production, thus retarding the fall that otherwise might already have commenced.

"Were these conditions better appreci-

ated, the world might even now be engaged in discounting future changes, as happened upon the discovery of the Californian and Australian goldfields, when gold rapidly declined, silver rising correspondingly and being stipulated in bonds for the payment of debts.

"The discovery of a California or a South Africa is, however, of less real significance than the evolution effected in working refractory gold ores, for the effect of the latter are widespread, bringing within profitable working range refractory gold deposits in all parts of the world.

"Exactly how much the cost of producing gold has declined cannot be stated, but the known facts indicate a decline of at least 30 or 40 per cent., and the decline may approach, or possibly exceed, 50 per cent.; but notwithstanding this decline, its purchasing power, as compared with other metals, has increased 40 or 50 per cent. That this anomaly must disappear, that the purchasing power of gold—i. e., its value—ultimately must fall as much as the cost of producing it has declined, cannot seriously be doubted. It seems probable that the factors already noted may retard this decline in value, and possibly it may be marked only by slowly enhancing values for all products, and may possibly occupy a period of several years, in which event the intervening period must afford extraordinary opportunities for the profitable operation of gold mines, mills and reducing works. * *

"The belief has gained wide currency that the present increase in gold production is limited to the development of newly-discovered districts, viz: the South African, Cripple Creek and West Australian; that when these attain their maximum no further addition to the output can be expected, except such as may come from the discovery of other deposits; and, as a corollary, that, barring such new discoveries, the output will thereafter decline. The considerations advanced in the foregoing pages, and the geologic and mining conditions known to obtain in nearly all mining districts, lead to very different conclusions.

"In every gold-mining district deposits exist, unavailable under the inefficient or expensive processes of the past, but which now can be worked to advantage. Placer deposits and free-milling ores are limited in extent and quantity, but the unfathomable deposits of refractory gold ores, existing in almost every mining district, may be worked upon a gigantic scale.

"The enhanced purchasing power of gold should, even at the former cost of producing it, make gold mining one of the most alluring industries of the times. The future among those alert to seize upon opportunities for profitable investments shows that increased value, with decreased cost of production, are recognized, even while the causes producing them may not fully be understood.

"The readjustment of the value of gold to its present reduced cost of production should be marked by a period of activity and prosperity in all classes of enterprise. With rising wages and rising prices for all products should come increased ability to discharge debts and obligations of all kinds; and with enhanced values should come such renewed confidence in the future as will prompt men to undertake those vast constructive enterprises which furnish employment and lighten the burdens of mankind. The writer believes we are entering upon a period of unexampled prosperity, which shall have, as its most potent factor, an enormous addition to the world's store of gold."

In another article on the same subject, Mr. Chance adds:

"Many persons well qualified to analyze

existing conditions believe that the movement toward an enlarged output of gold is yet in an incipient stage. This belief is based upon the fact that, aside from those actually engaged in or interested in mining, there are few who as yet realize that the gold-mining industry is passing through revolutionary changes, that the cost of producing gold has been falling while its value has been rising, and that the so-called 'boom' in mining has a sounder basis than the discovery of some new and rich goldfields. Never before in the history of civilization have the environments of the industry been so favorable, never before has the prospect of profitable mining seemed so well assured, as at the present time, and never before have such facilities existed for quickly increasing the output. The facilities are at hand, the incentive is plainly in sight, the activity has already commenced, and the public will soon be forced to modify the old idea that gold mining is merely one form of gambling.

"The cyanide process was patented in 1889, and was first applied to practical work on a large scale in 1890. It is estimated that more than 750,000 ounces (\$15,000,000) of gold was extracted from ores treated by this process last year. The results achieved by the extension of the chlorination process in the last few years are perhaps even more startling, and the increase in gold production traceable to reduced smelting cost may be estimated at a still larger quantity."

A Progressive Carolina Town.

A correspondent of the Manufacturers' Record writes as follows about the bright prospects of Cheraw, S. C.:

"The town of Cheraw, S. C., is taking on new life. Several small manufacturing industries have been started and others projected. Among those in successful operation are two knitting mills, a machine works, a cannery, broom factory, mattress factory and wagon works. The town has a bright future before it. The falls in the river at this place are said to be capable of supplying 1000 horse-power for electrical transmission. This power is daily wasting, and live parties could get it for the taking."

Mobile's Commercial Club.

The city of Mobile, Ala., has been making unusually rapid progress in a commercial way within the last two years. The fact that it has an energetic and persevering organization of business men has had much to do with this progress. The Commercial Club of Mobile is what its name implies in every sense of the word. At its recent annual meeting the president of the club, J. M. P. Inge, called attention to what has been done within the last year in his annual address, which contains much for similar bodies in other cities to consider. Among the projects which have been successful in the city and fostered by this organization are a new telephone system, which has greatly lessened the cost of these necessary instruments to their patrons; a large grain elevator; two new steamship lines, one to foreign ports; the raising of a fund to build a railroad from Mobile to Jackson, Miss.; more equitable freight rates, and several new factories. Such success as this shows that the club is well worth the amount of money which has been spent to keep it in existence. At the same meeting the annual election of officers was held and resulted in the choice of the following: President, Murray Wheeler; vice-presidents, Geo. E. Sage and William March. The Manufacturers' Record desires to congratulate Mobile in having such a valuable body of business men.

RAILROAD NEWS.

[A complete record of all new railroad building in the South will be found in the Construction Department.]

Southern's Increased Earnings.

The receipts of the Southern Railway for the last quarter have been received by the North Carolina railway commission. The total earnings for the three months of the roads owned by the Southern in North Carolina were \$457,810, an increase of \$12,731 over the same quarter a year ago. The earnings of the leased lines in the State increased \$89,101, or a total increase of nearly \$102,000 over the same period of 1895.

Norfolk & Western Coal Tonnage.

The official report of the coal tonnage from the several regions of which the Norfolk & Western is the outlet for the week ending May 16 show an increase from the West Virginia fields, bringing the total shipments for 1896 from the Flat Top field up to 1,466,717 tons, an increase of 115,590 tons over the corresponding period of 1895. The New River field shows an output of 1,316,266 tons, an increase of 141,181 tons over last year, the combined output from the two West Virginia fields showing a total shipment of 2,783,183 tons, and a gain of 256,780 tons.

Vanderbilts in Virginia.

It is generally understood that the Vanderbilts are now in control of the Norfolk, Albemarle & Atlantic road, also the summer resort at its terminus on the Atlantic coast. A dispatch from Norfolk announces that the name of the road is to be changed to the Norfolk, Atlantic & Southern, and that it will be changed at once from narrow to standard gage, and further extended in Princess Anne county. The Princess Anne Hotel, at Virginia Beach, is one of the finest in the United States, and is also controlled by the same syndicate. It is stated that the present owners may enlarge it and improve Ocean View Park, in which it is situated; also make use of the inland waters near the hotel for the benefit of pleasure-seekers.

Macon, La Grange & Birmingham.

The new owners of the Macon & Birmingham have reorganized it, and it is stated will change its title to Macon, La Grange & Birmingham. Mr. F. M. Edwards, of Boston, is president; E. C. Parsons, of Boston, secretary, and Julian R. Lane, of Macon, general manager. The directors are: L. F. Garrard, G. Y. Tignor, T. Crawford, of Columbus; Julian R. Lane, of Macon; F. M. Edwards, of Boston. The stockholders will meet June 30 to authorize the issue of \$500,000 of 5 per cent. bonds, payable in fifty years, the bonds to be of \$1000 each. It is supposed that Messrs. Parsons and Edwards, who purchased the road at foreclosure sale, represent some railroad company or syndicate which does not desire to appear in the transaction.

The Northeastern Extension.

The latest report regarding the Northeastern Railroad of Georgia, which, as already stated in the Manufacturers' Record, has been issued to E. A. Richards & Co., of Atlanta, Ga., is that Mr. Richards confirms the statement that it is to be extended to Chattanooga, Tenn. He is quoted as saying that the extension will make a total length of 120 miles, with Athens, on the Seaboard Air Line, and Chattanooga the terminal points. It will place Chattanooga seventy-six miles nearer New York, and will form a new

route from the marble quarries and mines in North Georgia. Mr. Richards claims that financial arrangements have practically been completed, and that surveyors are to be placed in the field at once, to be followed by the beginning of construction work as soon as the line is laid out.

Important Short Line.

A correspondent of the Manufacturers' Record at Opelika, Ala., writes as follows:

"The La Fayette Railway is being constructed and owned entirely by the merchants and citizens of La Fayette, Ala. Principal among them are Messrs. Schuessler Bros., R. W. Allen & Co., McGehee, Driver & Co., Tucker, Willingham & Co., D. G. Allen & Bro. and Walter B. Wood. The length of the road is about twenty-two miles. The grading is entirely completed. The track is laid for a distance of twelve or thirteen miles, and is now being operated upon. The work is now being pushed, and they hope to have the entire track completed between La Fayette and Opelika within ninety days. G. E. McGehee, La Fayette, Ala., is president of the road. J. R. McGehee, Opelika, Ala., is agent and general manager."

Charleston to Greenwood.

A dispatch from Charleston, S. C., announces that the Security Trust Co., of that city, which has been promoting a new line from Charleston to the West, has interested the Greenwood, Anderson & Western Company, of which Col. Mike Brown, of Barnwell, S. C., is president. In the matter, also W. B. Strang, Jr., & Co., of 15 Wall street, New York, railroad contractors. It is stated that the Security Company has made an arrangement with Strang & Co. by which the latter agree to build a road from Charleston to connect with the Greenwood, Anderson & Western, provided people in Charleston will take \$320,000 in bonds to assist the enterprise. If this connection is built a route terminating at Greenwood, on the Seaboard Air Line, will be formed, as the Greenwood, Anderson & Western is to be completed to that point. George A. Wagener is president of the Security Company.

Railroad Rates Too High.

A letter to the Manufacturers' Record from a gentleman in New York, who has for some time been considering the question of establishing starch works in the South, says:

"In April I took a trip to Spartanburg to look up the opening of manufacturing starch at that point. The outlook was very discouraging, since the price of corn is from ten cents to fifteen cents higher in the West, and freight rates are so arranged that except within a radius of fifty miles the local factory would pay higher rates than factories in the West, while on shipments to the seacoast the rate is lower from Cincinnati to the coast cities than it is from Spartanburg to these cities. The difference is from fifteen to twenty cents per 100 pounds, making it impossible to place starch in New England or in Europe in competition with the West."

Presuming that these statements as to freight rates are correct, they merit the careful investigation of the railroad people of the South.

C. & O. Improvements at Richmond.

The city council of Richmond, Va., has formally authorized the Chesapeake & Ohio Railroad Co. to make extensive improvements in their city. As already described in the Manufacturers' Record,

these improvements include a new passenger station of a very elaborate character, which will be reached by a viaduct of masonry and steel, also a number of sidings and minor buildings. It is expected that the work will cost \$2,000,000. The railroad station will be one of the finest in the country, and in keeping with the enterprise of the company which intends building it. The Chesapeake & Ohio in taking this step recognizes the importance of Richmond, and shows its willingness to aid in the development of this city. It is understood that work is to begin within the present year, and that the entire improvement is to be completed within four years. By the use of the viaduct at the station all of the trains on the James River division, as well as the main line of the Chesapeake & Ohio, will be brought into the same depot.

Georgia & Alabama.

The Georgia & Alabama Railroad Co. appreciates the fact that it has the shortest line between the cities of Montgomery and Savannah, and has established a train service which will be appreciated by the traveling public. Express trains are now run direct between the two cities, with Pullman sleepers and chair cars of the latest pattern and finest description. The running time between Montgomery and Savannah has been shortened to eleven hours. By leaving Montgomery at 8 o'clock in the evening the passenger reaches Savannah at 7 o'clock in the morning, in time to board the trains for the North or to take any one of the steamers which ply from that port. It is evidently the purpose of the Georgia & Alabama Company to keep its line up to a high standard. At Americus, important improvements are under way, including the lowering of the grade of the line in the city; a cut-off ten miles in length is being made at Lumpkin, which will considerably shorten the main line, while a quantity of new rolling stock, including several very large engines, will be added to the equipment.

What Travelers Need.

The Pennsylvania Railroad Co. has published its annual summer excursion route book. This work, which is compiled with the utmost care and exactness, is designed to provide the public with short descriptive notes of the principal summer resorts of Eastern America, with the routes for reaching them, and the rates of fare. There are over 400 resorts in the book to which rates are quoted, and over 1500 different ways of reaching them, or combinations of routes, are set out in detail. The book is the most complete and comprehensive handbook of summer travel ever offered to the public. Its 215 pages are inclosed in a handsome and striking cover, in colors. Several maps, presenting the exact routes over which tickets are sold, are bound in the book. It is also profusely illustrated with fine half-tone cuts of scenery along the lines of the Pennsylvania Railroad and elsewhere. It may be procured at any Pennsylvania Railroad ticket office at the nominal price of ten cents, or upon application to the general office, Broad Street Station, Philadelphia, by mail for twenty cents.

Railroad Notes.

J. M. Hunter has been appointed traveling freight and passenger agent of the Georgia & Alabama, with headquarters at Montgomery, Ala.

The Baltimore & Ohio Railroad Co. has awarded a contract for ten more locomotives. They will be built by the Cooke Locomotive Works, of Paterson, N. J., and will be consolidation freight engines.

with 22x28-inch cylinders. They are unusually heavy, and will be some of the most powerful types of motor power ever constructed in this country.

The Wheeler Transportation Co., of Baltimore, is having an additional steamer built for use on Chesapeake bay and its tributary waters.

T. R. Ryan, formerly commercial agent of the Mexican Central at St. Louis, has been appointed general agent of that road, with headquarters at Louisville, Ky.

C. A. Benscoter has been appointed assistant general passenger agent of the Southern, in charge of the Knoxville, Cumberland Gap & Louisville division of the system.

The title of the reorganized Louisville, St. Louis & Texas road is to be the Louisville, Henderson & St. Louis. The following officers were elected: Attila Cox, president; Harry Weissinger, vice-president, and E. M. Post, of New York, secretary.

The Southern Railway Co. has determined to divide its fifth division, which includes most of its lines in Georgia, into two parts, one of which will comprise the eighth division. James H. Barrett has been appointed superintendent at Atlanta, and will also have charge of the terminals in that city, while W. R. Beaulieu will be in charge at Macon, Ga.

The Gulf & Interstate Railroad Co. is preparing to do an extensive lumber business in Bolivar Point, opposite Galveston, and arrangements are being made for building extensive wharves at its seaport terminus. The line penetrates a section of Texas in which the lumber interests are very important, and a large share of its freight traffic will be of this kind.

The display of the Plant Railway & Steamship Co. at the Atlanta Exposition has been described in an illustrated pamphlet of 100 pages, which is issued as a souvenir. The book contains a complete list of the exhibits, a description of the special features and a number of excellent full-page illustrations of the pyramid which attracted so much attention on the exposition grounds.

The Illinois Central Company has greatly improved its service between Chicago, Cincinnati and New Orleans. It is understood that it has gone to an expense of nearly \$50,000 in the purchase of new rolling stock, purposely for the express trains which have been placed on the route between these cities. By the new arrangement a double daily service has been placed in operation between Chicago and New Orleans by the way of Louisville and Cincinnati. The cars are lighted with Pintsch gas, are elegantly furnished and combine the latest modern ideas for comfort and convenience. The trains are vestibuled, and have Pullman sleepers attached between the cities mentioned.

In a letter to the Manufacturers' Record, President Azel Ford, of the Beatty Lumber Co., states that this company is now building a railroad line ten miles long, from Blade Station, on the Chesapeake & Ohio, up Glade Creek valley. The company intends developing the coal and timber section in the valley, which is drained by Glade creek, Big and Little Beaver creeks and Piney creek. The company controls 11,000 acres of land, and has leased a large additional tract. It intends to cut at least 6,000,000 feet of white-pine timber the first year, as already stated in the Manufacturers' Record, and will prepare a large quantity of staves. It is expected to build the railroad line by August 1, when the different enterprises will be in active operation.

PHOSPHATES.

Phosphate Markets.

Office Manufacturers' Record,
Baltimore, Md., June 4.

The volume of business in the local phosphate market does not improve as the season advances, and the demand is light. It will likely be in July or August before any decided demand from manufacturers sets in, and in the meantime business will be dull. The reports from mining sections are not materially changed during the week, and in South Carolina matters are quiet. Crude phosphate at the mines is still quoted at \$3; hot-air-dried, \$3.25 f. o. b. Ashley river and \$3.45 f. o. b. Charleston. Ground rock is quoted \$5.50 f. o. b. city. Shipments of Florida rock continue fair, and the shipments through the ports so far this year are about 30,000 tons a month. The price now averages about \$3.25 per ton at the mines, so that there is no money in the industry at that figure. In the local market there are no arrivals reported. The freight market is dull, with a moderate offering of tonnage and no charters reported during the week. In New York the freight market is moderately active, with steamers in fair demand and the rates generally firm. The following charters are reported during the week: A British steamer, 1394 tons, from Savannah to Rotterdam with phosphate at 12/10½, June, and a Spanish steamer, 2049 tons, from Fernandina and Virginia to Hamburg with phosphate and general cargo, 13/6.

Fertilizer Ingredients.

The market for ammoniates has ruled quiet during the week, although there has been considerable inquiry, with prices about steady at the close. Messrs. Thos. H. White & Co., in their circular for May, say: "We have to note considerable activity in ammoniates during the month, with a decidedly weaker though irregular market. The few prominent Western packing-house tankage products unsold May 1, notably the Cudahy Packing Co. and Anglo-American, have found buyers. Large sales have been made of old stock acid fish for prompt delivery, and of garbage tankage deliveries to January; all sales on the basis of \$1.50 to \$1.55 and 10 delivered to Richmond and Baltimore. High-grade dried blood has sold at \$1.65, and concentrated at \$1.55 per unit delivered East." Stocks in the West are light; dried blood, \$1.30 to \$1.35 Chicago and \$1.25 to \$1.35 Kansas City; concentrated, \$1.25 to \$1.30; tankage 9 and 20, \$12 to \$12.50 Chicago, and \$10.50 to \$11.50 Kansas City.

The following table represents the prices current at this date:

Sulphate of ammonia, gas....	\$2 30@	—
Sulphate of ammonia, bone....	2 15@	—
Nitrate of soda.....	1 80@	1 85
Hoof meal.....	1 55@	—
Blood.....	—	1 65
Azotine (bone).....	—	1 60
Azotine (pork).....	—	1 65
Tankage (concentrated).....	1 55@	—
Tankage (9 and 20).....	1 55 and 10	—
Tankage (7 and 30).....	15 50@	—
Fish (dry).....	19 00@	—
Fish (acid).....	10 00@	11 00

Phosphate and Fertilizer Notes.

The British steamship Glenhafren cleared from Fernandina on the 27th for Stettin, Germany, with 3100 tons of phosphate rock.

The British steamship St. Regulus cleared last week from Savannah, Ga., with 1997 tons of phosphate among her cargo for Genoa, Italy, valued at \$19,997.

The steamship Walviston sailed from Port Tampa, Fla., on the 29th ult. for Dordrecht with 3300 tons of phosphate rock from the Florida Phosphate Co.; steamship Jane Delsall on the 27th ult. for Bremerhaven via Norfolk with 2465 tons of phosphate from the Bone Valley

Phosphate Co., and the schooner Marjorie for New York with 2030 tons of phosphate from the Bone Valley Phosphate Co.

The season for the sale of fertilizers having ended, it is found that the business in this industry in North Carolina is double in volume that of last year at this date. It is also stated that this season's acreage in cotton is 50 per cent. greater than last season.

The total shipments of phosphate rock to domestic ports from the port of Charleston, S. C., from September 1, 1895, to May 29, 1896, were as follows: Baltimore, 20,495 tons; Philadelphia, 7147 tons; Richmond, Va., 14,185 tons; New York, 7007 tons; Weymouth, 6820 tons; Wilmington, Del., 5395 tons; Boston, 2130 tons, and other ports 20,634 tons—making a total of 83,813 tons, against 72,298 tons for 1894-95. The exports of ground phosphate for the same period were 7927 tons, against 1365 tons last year.

The Charlotte Harbor Lighterage & Stevedore Co., of Punta Gorda, Fla., reports the shipments of phosphate rock from that port for the month of May as follows: Schooner Kate S. Flint for New Orleans with 969 tons, schooner Lizzie M. Eells for Mobile with 155 tons, steamer Francisca for King's Lynn with 2981 tons, schooner Nellie W. Howlett for Richmond, Va., with 800 tons, schooner Augustus Welt, for Norfolk, Va., with 1780 tons, and schooner Jas. G. Beecher for Baltimore with 1370 tons; total shipments by the Peace River Phosphate Mining Co. for the month, 8064 tons, of which 5081 tons were domestic and 2981 foreign; previously reported, 4588 tons domestic and 17,723 tons foreign, making a total of 22,311 tons, and a grand total to date of 30,375 tons.

The business of the port of Fernandina, Fla., for the month of May was fairly active, the latter half of the month being rather quiet. The phosphate shipments reported were as follows: 4th, British steamship Glenayron for Rotterdam with 3550 tons; 7th, British steamship Royalist for Rotterdam with 4600 tons; 16th, British steamship Bencorlie for Stettin, Germany, with 2500 tons; British steamship Amaryllis for Geestemunde, Germany, with 1100 tons; 20th, British steamship Thomas Melville for Hamburg with 2220 tons; British steamship Glenhafren for Stettin with 3150 tons; 21st, British steamship Paru for Antwerp with 2200 tons; total for the month, 19,320 tons. The largest phosphate cargo ever taken from the United States was taken by the Royalist on May 7, being 4600 tons. The steamship Glenayron, which sailed a day or two later for Rotterdam with 3550 tons, struck on the Diamond Shoal off Hatteras and was reported lost.

The call for a convention of fruit growers, recently published in the Manufacturers' Record, to be held in Chicago, resulted in the formation of the American Fruit Growers' Union, with headquarters in Chicago. John D. Cunningham, of Marietta, Ga., was elected president.

According to reports of the tax collector at Atlanta, that city now has a population of 125,000. While the number may be somewhat overestimated, there is no question but what the new arrivals in the city during the last three months for permanent residence have been very large. The tax collector, A. P. Stuart, states that since March 1 he finds that 1500 names, each representing a family, have been registered on his books, which would give an increase of fully 9000, not counting possibly 150 or 200 families who have not registered.

FINANCIAL NEWS.

New Corporations.

O. P. and B. D. Heath will open a national bank at Charlotte, N. C.

Young & Wilkerson, of Manchester, Tenn., are about to open a bank at Wartrace, Tenn.

George W. Lindsay, Stephen R. Mason and others, of Baltimore, have organized the Fraternal Trust & Banking Co., with \$100,000 capital, to do business among the Knights of Pythias.

The Michael Loan Co. has been formed at San Antonio, Texas; capital stock \$50,000. This association is formed for the purpose of accumulating and loaning money and for the purchase and sale of goods, wares and merchandise; incorporators, Leopold M. Michael, Emile Blum, Louis Michael and R. Gabrielsky.

New Securities.

The city council of Cleburne, Texas, will issue \$21,000 in bonds for special purposes. Address the mayor.

The town of Laurens, S. C., has voted to issue \$30,000 in 6 per cent. bonds for municipal improvements. Address the mayor.

The Guardian Trust Co., of Baltimore, has secured an issue of \$10,000 in Elkton (Md.) school bonds. The price paid was \$10,600.

The issue of Georgia 4 per cent. bonds was not awarded to outside bidders, but to a syndicate of Atlanta people which included W. H. Patterson. The syndicate offered 106—the highest price of all for the total issue, \$242,000.

Austin county, Texas, will sell \$18,000 worth of 5 per cent. bonds for the purpose of erecting a jail. Bids will be received until June 15 by S. R. Blake, county judge, Belleville, Austin county, Texas.

Interest and Dividends.

The Farina Mills Co., of Raleigh, N. C., has declared an annual dividend of 3 per cent.

The Alabama Building and Loan Association has declared a semi-annual dividend of 3 per cent.

The Southern Mutual Insurance Co., of Atlanta, during the past year paid \$268,000 in premiums, of which \$220,000, or 75 per cent., has been paid to stockholders in dividends.

Financial Notes.

E. A. Heard has been elected cashier of the Merchants' National Bank at Rome, Ga.

Tennessee's Anniversary.

The centennial anniversary of the admission of the State of Tennessee into the United States was celebrated at Nashville on June 1 by a parade and the dedication of the exposition grounds with appropriate exercises. About 25,000 people were present. The exposition is to be opened in 1897.

The Channel Completed.

A dispatch from Texas City, Texas, states that the ship channel to the docks at that point has been completed. Careful soundings taken throughout its entire length show an average depth of from seventeen to eighteen feet. It has an average width at the bottom of fifty feet, by 150 feet at the top. Vessels drawing sixteen feet entering Galveston harbor can steam direct to the free docks at Texas City, where they will find ample berth room and receive cargo direct from the cars. Texas City has rail communication with every railway entering Galveston, and last season exported 54,000 bales of cotton on ten feet of water.

TEXTILES.

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

Opposed to Sizing.

Charlotte, N. C., June 2.

Editor *Manufacturers' Record*:

In your last week's issue one of your correspondents, Mr. Parkinson, offered a suggestion for increasing the extent of foreign trade in cotton goods, which practically resolved itself into the addition of weighting substances to cloth until they should be so cheap apparently as to enable the United States to undersell all other nations. While the statements in Mr. Parkinson's letter were very true, and his defence of heavy sizing one of the best that I have ever seen either in Europe or on this side of the Atlantic, still I think it would be detrimental to the best permanent interests of the South to build up a trade in such a manner, and not only detrimental, but difficult. To begin with, the making of sized goods is unsuitable to the climate of the South. Sized goods, such as are made in England, have the warps increased in weight by the addition of metallic salts, glutinous starches, white earth or other substances until the cotton only forms a percentage of the whole. I have in my possession cloth made with 150 per cent. of size on the warp, and have had goods made under my supervision in European mills with all percentages from 10 to 150, and can confirm Mr. Parkinson when he states that sizing is a science and ranks with carding as the most important process in a textile mill, as different combinations of size have to be used for each percentage of size, each class of goods and even for the different countries that the cloth is intended for. Now, let the reader imagine a warp of No. 36s loaded with the above mixture, dried until it is as brittle as glass, and the weaving of it in an atmosphere like that of the South, and he has a problem before him compared to which the spinning of fine counts is simplicity itself. In England the finest counts are often spun without artificial humidity, but even there these heavily-sized goods are always woven in humidified mills.

Secondly, if the advantages to be gained were great, and the importation of weighted goods into foreign countries a novelty, it might be advisable for the South to begin, but the idea is not a new one, and there is hardly a foreign market that is not acquainted with heavily-sized goods. The mild Hindoo, the swarthy Mexican, or the heathen Chinese know when they buy English sized goods at a less price per pound than that of skein yarn, that they are not pure. The merchants are all experts, and cannot be imposed upon even to the extent of 5 per cent. They have certain systems of testing the actual numbers of yarn used as against the weight of goods delivered, and are so strict in their requirements that the English heavy shirting trade is known to be one showing the closest margins in that country, manufacturers having to be content with a profit of three to five cents on a 37½-yard piece of goods. The advantage of heavy sizing may have been great in the early days of its introduction, but it is now played out, and the English manufacturers who are recognized as doing the best are those who have built up a reputation on their comparatively pure goods, and whose marks and "chops" have become known to the natives.

A chapter from the past history of American foreign textile trade proves that to trade in pure goods is the best policy. One important branch of the China trade is that of sized goods, which

is controlled by European houses, but another important branch is that of pure sized drills and sheetings, which is controlled by American firms. Slowly and surely, by shipping pure sized goods, the American has got a foothold in a market previously flooded with weighted goods, and now the Chinese merchant has such faith in the purity of American drills and sheetings that no other nation can shake his belief in American cloth, and the marks on the productions of Pölzer, Piedmont and other Southern mills are as well known among the Chinese as the "Fruit of the Loom" or "Lonsdale Cambrics" are here.

The cotton manufacturers of the South do not need to make weighted and filled goods in order to develop their trade. Before we need make sized goods there is the whole of the domestic trade to be provided for; the heavy and medium goods, the sheetings, shirtings and print goods now made in the East have to be made South, and the Eastern mills have to make the better and finer fabrics still imported in such large quantities.

When these changes have been made the South can then continue the efforts to supply the needs of foreign countries in pure sized goods, and before this is done and sized goods need be made, the 3,000,000 spindles of the South will have developed into five times that number.

Any country in the world can begin to adulterate, but if there is one section more than another that ought to make cotton goods from cotton exclusively, if only in justice to the farmer, it is in the South, where the mills are in the midst of the cotton-fields. To treat of the best ways of developing foreign trade would make this communication too long, but having been in touch with most of the foreign markets, I do not hesitate to prophesy for the South a huge foreign business in cotton goods ultimately.

C. P. BROOKS.

10,000-Spindle Mill for Shreveport, La.

Arrangements have been completed at Shreveport, La., for the erection of a large cotton mill, the deal having just been closed by Mr. Howard Cole. The plans provide for the erection of a plant to be equipped with 10,000 spindles and 247 looms, and the entire complement of new machinery is now ready to be shipped to Shreveport. The parties with whom the deal was closed include Messrs. J. F. Keeney & Co. and associates of Chicago, Ill. The product will consist of sheetings, shirtings, seamless bags, carpet warps, etc.

A \$150,000 Woolen Mill.

The Eagle & Phoenix Manufacturing Co., of Columbus, Ga., will commence at once the improvements to its cotton mill recently decided upon. These will consist of replacing much of its present equipment with new machinery, expending about \$75,000, and the alterations will be made in such a manner that operations will not be interrupted at any time. The company has also determined on the erection of a large woolen-mill addition to its plant, to be located in Alabama, opposite Columbus. This plant is to cost about \$150,000 and employ 200 hands.

A 20,000-Spindle Mill.

Arrangements are now nearing completion for the erection of the cotton mill to be located near Aiken, S. C., as previously mentioned in the *Manufacturers' Record*. The plant will be owned and operated by Mr. Chas. W. Davis, of Graniteville, S. C., and associates, who will organize under the name of the Warren Manufacturing Co., with a capital

stock of \$400,000. It is understood that Mr. Davis has closed contracts for the necessary machinery with Messrs. C. E. Riley & Co. and the American Howard & Bullough Machine Co., both of Boston, Mass. An equipment of 20,000 spindles will be installed.

Another Cotton Mill for Columbia, S. C.

A movement has been started for the erection of another cotton mill at Columbia, S. C., and books of subscription have been opened at the office of Mr. Jos. W. Muller. The establishment of a 10,000-spindle plant with complement of looms is contemplated, and it will be known as the Broad River Cotton Mills, with a capital stock placed at \$150,000. The projectors of the enterprise are Messrs. Jos. W. Muller, W. B. Smith, Whaley, George A. Shields, J. P. Richardson, W. B. Lowrance, S. A. Pearce and T. A. McCreery. Arrangements have already been made which secure a suitable site, and the necessary water-power has been contracted for.

Textile Notes.

There is talk of the erection of a cotton mill at Riverside, Ala., and Mr. R. W. Alford is interested.

The new Blacksburg Cotton Mill Co., of Blacksburg, S. C., has organized its board of directors by the election of Dr. J. G. Black as president, and Mr. M. M. Freeman, secretary-treasurer.

There is a movement on foot at Florence, S. C., for the erection of a cotton mill. It is proposed to form a company of \$10,000 capital stock, and at a preliminary meeting about half of this amount was subscribed.

The Knoxville Woolen Mills, of Knoxville, Tenn., has placed an order for 5000 spindles. This machinery is to be placed in the company's additional building now being erected, and will be furnished by the American Machine Co., of Pawtucket, R. I.

Mr. H. J. Olney, of Chicago, Ill., is said to be making arrangements for the erection of a 10,000-spindle mill in Waco, Texas. Mr. Olney has lately been investigating in Waco, representing Chicago capital, and it is thought probable that the plant will be located.

The new Jonesville Knitting Mill, of Jonesville, S. C., has commenced operations, starting with eighty-six machines. Some orders have already been received, and a fine class of goods will be produced. More machinery, consisting of 136 needle machines, will be put in.

A company will be organized at once for the equipment of a cotton mill at Lithia Springs, Ga. A plant of 3000 spindles will be erected, and contracts for the necessary machinery have been awarded. Atlanta capitalists are interested in the enterprise, including Joe James, Columbus Blair, Camp Strickland and J. A. Watson.

The Cherokee Falls Manufacturing Co., of Blacksburg, S. C., referring to its contemplated enlargements, as recently announced, states that it will soon be in the market for machinery. The necessary buildings are already prepared to receive the machinery, and the water-power is developed. At first 4800 spindles and 400 looms will be put in.

The Landrum Cotton Mills, of Landrum, S. C., chartered last week, has for its incorporators Messrs. T. D. Earle, J. K. Hottel and others, who have elected directors as follows: Jacob Carpenter, Joseph Lee, Bayless T. Earle, Henry Liles, W. A. Law, A. B. Calvert, H. S. Chadwick and S. B. Ezell. Mr. Earle has also been chosen president and treasurer. Arrangements will be made for

the commencement of work as soon as possible on the proposed mill. The company's capital stock is \$100,000.

The Elford Manufacturing Co., of Albemarle, N. C., has been organized and will erect a cotton mill at Albemarle. The capital stock is placed at \$75,000, over \$40,000 of which was subscribed in a few hours. The directors of the company will be Messrs. John S. Elford, J. W. Cannon, of Concord; I. P. Elford, W. J. Swink and W. R. Foreman. Mr. Cannon is president and John S. Elford, of Albemarle, secretary-treasurer.

Superficial Examination of Ores Free

The *Manufacturers' Record*, seeking to turn attention to the mineral resources of the South and to aid its readers in the intelligent investigation as to what may or may not be of value, has arranged with Mr. Charles Catlett, chemist and geologist, of Staunton, Va., to make superficial examinations of samples without charge. Such samples will be reported in the *Manufacturers' Record*, with a word of explanation as to probable or possible value.

The following directions should be observed:

Samples should be sent to Charles Catlett, No. 10 New Court House street, Staunton, Va., with all mail or express charges prepaid. The name and address of sender should be clearly stated on package.

Care should be taken to select an average sample, otherwise the examination will prove of no value. Quite a small quantity will be sufficient.

A postal card or letter to Mr. Catlett, with a word of explanation as to mode and exact location of occurrence, would assist in giving value to the examination.

D. Hutchinson, Rock Hill, S. C.: Good quality "brownstone."

D. W. Ebaugh, Greenville, S. C.: Quartz; no indication of value.

Wyman & Cairns, Pineville, Ky.: Quartz; no indication of value.

J. N. T., Macon, Ga.: Fair quality of kaolin containing free silica and mica.

J. W. Lindau, Greensboro, N. C.: Micaceous iron ore; pyrite; quartz; no indication of value.

Ebb, F. Parker, Becca, S. C.: Sample quartz. Superficial examination gives no indication of value.

H. G. Martin, Little Rock, Ark.: Ferruginous quartz. Superficial examination gives no indication of value.

W. C. Seavir & Sons, Marion, Va.: Limestone; from its general character, worth investigation as a lithographic stone.

J. J. Lee, Lynchburg, Va.: 1. Fair quality brown hematite iron ore. 2. Ochre containing too much impurity to be of value. 3. Lean iron ore; probably too lean to be of value.

Postal Telegraph in Texas.

A dispatch from Texas announces that the Postal Telegraph-Cable Co. has finally determined to extend its service into the Southwest. S. W. Foster has been appointed general superintendent for Texas and Arkansas, and it is understood that the lines will be extended to the principal Texas cities as early as possible. The service which the Postal Company has given to most of the States which it traverses during the last few years shows that it is a very necessary corporation, and that its facilities for transmitting messages, both by telegraph and cable, are exceptionally good. Its entry into Texas means a great benefit to the industrial interests of that State.

The Commercial League and Board of Trade of Little Rock, Ark., have consolidated under the title of the Board of Trade. The officers are: President, W. W. Dickinson; vice-president, Henry M. Cooper; secretary, G. G. Harkness; treasurer, John G. Fletcher.

COTTONSEED OIL.

This department is open for the full and free discussion of trade topics and practical questions, and contributions are invited from men who are identified with this industry. Items of news are always acceptable.

The Market for Cottonseed Products.

New York, N. Y., June 2.

As indicated in our letter of the previous week, the market for cotton oil has weakened. Lard and tallow values uniformly declining, each surprisingly low record being eclipsed by a succeeding one, has brought about a demoralized condition of affairs in cotton oil, which, together with an absence of demand, culminated in a drop of 1 cent per gallon for prime yellow, all the grades being correspondingly depreciated. At the decline increased interest is evinced by shippers, and considerable activity is promised during the present week. The last vestige of bullish sentiment would appear to have been effectually removed, even from the most sanguine spirits in the trade, by reason of the unparalleled continuance of stringent trade conditions. The remembrance of the financial disaster which several months ago overtook those who, encouraged by the existence of low prices, headed up, and with a reasonable promise of success, acts as a powerful deterrent from a similar course, although values are very appreciably lower at this time. There is evidently no faith in the future of cotton oil or allied animal products, and purchases, in the main, to this time are confined to current needs only. Just how much activity which will be prospectively imparted to trading, by reason of the decline, yet remains to be seen, as owing to the changed conditions the position of holders is not clearly defined. Crude receives no attention, owing to the drop in refined. Prime white and butter oils are neglected, notwithstanding the reduced quotations, while off-grade yellow, although scarce, offers less interest than for many weeks. Receipts have diminished to 2350 barrels, the greater portion of which included through shipments. Lard rules in Chicago at this writing at 4.22½ cents, July options, while tallow here is steady at 3 cents. With the exception of a shipment of 1600 barrels to Marseilles and 400 to Genoa, exports were unimportant. The subjoined are the closing prices: Prime crude, 19 to 20 cents; loose, f. o. b. mills, 16½ to 18 cents; off-grade crude, 18 to 19 cents; summer yellow and off-grade yellow, 24 cents; prime winter, 31 to 33 cents; prime white, 26½ cents; butter grades, 25½ to 26 cents; and soap stock, ¾ to ¾c. per pound. Notwithstanding the adverse attitude of recent market happenings, there are holders of choice yellow who adhere to old prices.

Cake and Meal.—The market presents no change, whether in values or demand, alike for the home or foreign trade. Exports have declined, 700 tons of meal from New Orleans to Hamburg being the only important shipment for the week. As there are a number of mills yet in operation, production continues, and although under normal trade conditions available stocks would be considered light, the supply greatly exceeds the demand. Cake values in England have not improved, the plentiful supply of other feeding stuffs restricting consumption very perceptibly. No receipts are reported at Eastern points.

Cottonseed-Oil Notes.

Messrs. C. H. Dubbs and T. S. Logan, contractors at Meridian, Miss., were awarded the contract last week for the building of a large \$25,000 oil mill at Clarksdale, Miss. The contract was

awarded over other bidders from Memphis, New Orleans and other points.

The shipments of cottonseed products from the port of Galveston, Texas, during the month of May were 64,248 sacks of cottonseed meal and 271 barrels of cottonseed oil to Hamburg, Germany.

It is stated that prominent citizens of Greers, S. C., are formulating plans to build a cottonseed-oil mill. Confident hopes of success are entertained, and the purpose is to erect a mill of twenty tons' capacity.

The Kyle Oil Co., of Kyle, Texas, is making repairs to machinery and getting its plant in shape for the coming season. The company reports cottonseed oil as weak and lower, say, sixteen cents f. o. b. mills. The annual election of officers of the company took place on Tuesday last.

The market for cottonseed products in Texas is moderately active, with some pressure on the part of mills to sell, as the new season is approaching. There is considerable off oil on the market, the damage being caused by the hot weather prevailing. Prices at Houston, Texas, are about a cent lower than last week, caused by the recent sharp decline in lard.

The steamship Galicia, the second of the Hamburg-American Line, arrived at Galveston, Texas, on the 28th ult. consigned to Messrs. Fowler & McVitie, and will take a cargo of corn, cottonseed oil, cake, cottonseed oil and meal, etc. The bark James A. Wright arrived from Philadelphia last week and will also load at Galveston with cottonseed oil and proceed to Gibraltar for orders.

A charter was issued last week to the Sumter Cotton Oil & Fertilizer Co., of Sumter, S. C. The directors are Perry Moses, Abe Ryttenberg, A. C. Phelps, W. B. Burns, U. J. China, M. Moise and H. Harby. The officers of the company are: Perry Moses, president; Abe Ryttenberg, vice-president, and A. C. Phelps, secretary and treasurer. The required amount of the capital stock has been paid in. The company will erect a plant to cost about \$18,000, the mill to have a capacity of thirty tons per day.

At a meeting of the Chattanooga Cotton Oil Co. at Chattanooga, Tenn., on Monday last a dividend of 10 per cent. was declared, payable at once. The directors elected for the ensuing year were E. G. Richmond, A. S. Glover, W. D. Roberts, Herbert Bushnell and H. Bond. The board of directors elected the following officers: E. G. Richmond, president; W. D. Roberts, vice-president, and H. Bond, secretary and treasurer. The company will enlarge its plant by putting in a new boiler and engine and a number of rollers. Operations will be commenced on October 1, when about sixty men will be employed.

The annual meeting of the stockholders of the Florence Cotton Oil Mill Co., of Florence, S. C., was held in that city on the 25th inst. The president's report showed the plant to be in first-class condition, while that of the secretary and treasurer was very satisfactory. The mill did a fine business last season, and a dividend of 7 per cent. was declared and ordered paid in cash to the stockholders. The following board of directors were elected for the ensuing year: H. L. Odiorne, Isaac Sulzbacher, Sol. L. Loeb, John McSweeney, James P. McNeil. At a subsequent meeting of the board of directors W. H. Odiorne was elected president; Isaac Sulzbacher, vice-president, and Sol. L. Loeb, secretary and treasurer.

The market for cottonseed products in New Orleans is dull and unchanged. Receivers' prices are quoted as follows: Cottonseed, \$9 per ton of 2000 pounds

net to the mills, no commission of any kind to be added; cottonseed meal jobbing at depot, \$17.25 to \$17.50 per short ton of 2000 pounds; for export per long ton of 2240 pounds f. o. b., \$19 to \$19.25 for current month; oilcake for export, \$19 to \$19.25 per long ton f. o. b.; crude cottonseed oil at wholesale or for shipment, strictly prime in barrels per gallon, 19½ to 20 cents; loose per gallon, 16 to 18 cents, according to location of mill; refined cottonseed oil, prime in barrels per gallon, at wholesale or for shipment, 23 to 24 cents; cottonseed hulls delivered per 100 pounds, according to location of mill, 20 to 25 cents; foots, 1 to 1½ cents; linters, according to style and staple and irrespective of color—A, 4 cents; B, 3½ to 3¾ cents; C, 3 cents; ashes, none.

Iron Markets.

Cincinnati, Ohio, May 30.

The market has been saved from absolute death during the past week by a few transactions ranging from fifty to 3000 tons. No revival in interest is shown, and but little is expected in the way of new business until July. Consumers with light stocks are hurrying forward iron for immediate use, while others are requesting suspension of shipments to reduce accumulations in their yards pending July 1 inventory.

Birmingham furnaces generally are holding prices firm.

There is about the usual movement of small lots of special brands of high silicon and charcoal irons.

We quote for cash f. o. b. cars Cincinnati:

Southern coke No. 1 foundry...	—@ \$11 00
Southern coke No. 2 foundry...	—@ 10 50
No. 1 soft...	—@ 10 50
Lake Superior coke No. 1...	12 00@ 13 00
Lake Superior coke No. 2...	11 50@ 12 00
Hanging Rock charcoal No. 1...	16 00@ 17 00
Tennessee charcoal No. 1...	13 00@ 14 00
Jackson Co. silvery No. 1...	14 00@ 14 50
Southern coke, gray forge...	—@ 9 50
Southern coke, mottled...	—@ 9 50
Standard Alabama car-wheel...	15 00@ 16 00
Tennessee car-wheel...	14 00@ 15 00
Lake Sup. car-wheel & malle...	15 25@ 15 50

Philadelphia, Pa., May 30.

This being Decoration Day, there is no business for the moment in sight, offices and factories having generally closed.

The outside lots of steel held by middlemen has been about absorbed, and from now on steel will have to be bought from first hands and prices will have to be paid that will net the maker a slight profit. July seems to be the time fixed for making contracts, and unless all signs fail the buying will become general inside of the next six weeks.

We quote for cash f. o. b. Philadelphia docks:

No. 1 X standard Alabama...	—@ \$12 00
No. 2 X standard Alabama...	—@ 11 50
No. 1 X standard Virginia...	—@ 12 50
No. 2 X standard Virginia...	—@ 12 25
No. 1 X lake ore iron...	—@ 14 50
No. 2 X lake ore iron...	—@ 14 00
Lake Superior charcoal...	16 15@ 16 50
Standard Georgia charcoal...	16 75@ 17 50

Buffalo, N. Y., May 30.

There is no material change to note in the situation as seen from this point. The consumption of foundry iron keeps up, and the feeling grows stronger among founders that they will continue to receive at least as much business during the summer as they have had for some months past. Charcoal iron is, if anything, a trifle firmer, as more of the furnaces in the Lake Superior district work up ore purchased on the old basis. Some good-sized sales of local coke irons have been made during the past week, but on the whole sales have been confined to small amounts for quick shipment.

We quote on the cash basis f. o. b. cars Buffalo:

No. 1 foundry strong coke iron	—@ \$13 50
Lake Superior ore...	—@ 13 00
No. 2 foundry strong coke iron	—@ 13 00
Lake Superior ore...	—@ 13 00
Ohio strong softener No. 1...	13 50@ 14 00
Ohio strong softener No. 2...	13 00@ 13 50
Jackson county silvery No. 1...	15 25@ 15 50
Southern soft No. 1...	—@ 12 40
Southern soft No. 2...	—@ 11 90
Hanging Rock charcoal...	—@ 18 00
Lake Superior charcoal...	14 00@ 14 50

New York, N. Y., May 30.

Politics being uppermost in all men's minds, but little thought is given to any new plans in business. Many schemes that were in process have been temporarily put aside, awaiting the return of confidence and settled conditions. In certain circles in New York it is the proper thing to express grave alarm at the prospect of the nomination of McKinley, because of his alleged unsound money views, and so much is made of this that Wall street and international sentiment is affected, stocks decline, capital displays renewed caution and everything hesitates. A little analysis shows that this clamor originates with free-trade, mugwump, democratic and Platt machine papers, and is confined pretty closely to them. It deceives fewer people than it did a month ago. The great mass of people persist in believing that the nomination and election of McKinley will restore confidence and start the nation on an era of better times. The iron markets are utterly devoid of life. Liberal shipments are going forward on old contracts, but there is practically no new business. Furnaces are blowing out both North and South, but still there is apparent overproduction. We say apparent, because it is doubtful whether actual consumption is not close upon production. Statistics have little significance either in waiting or in very active markets, for there is no reliable way by which stocks in consumers' yards can be traced. The 4500 foundries and mills in the country would scarcely need to add 150 tons each to their stocks to absorb all the pig iron this side of the Atlantic. We believe stocks in buyers' hands to be decreasing at this time as fast as they are increasing at the furnaces. Before January 1 we shall know what the facts are.

We quote for cash f. o. b. docks:

No. 1 X standard Southern...	—@ \$12 00
No. 1 X choice Virginia, such as Shenandoah...	—@ 12 75
No. 2 X Alabama or Virginia...	—@ 11 50
No. 1 soft Ala. or Virginia...	—@ 11 50
No. 1 X lake ore coke iron...	—@ 14 50
No. 2 X lake ore coke iron...	—@ 14 00
Lake Superior charcoal...	16 35@ 16 50

St. Louis, Mo., May 30.

All thoughts are now centred on the terrible destruction of life and property by the tornado, and business is at a standstill.

We quote for cash f. o. b. St. Louis:

Southern coke No. 1...	—@ \$11 50
Southern coke No. 2...	—@ 11 00
Southern coke No. 3...	—@ 10 50
Southern gray forge...	—@ 10 00
Southern charcoal No. 1...	—@ 15 00
Ohio softeners...	—@ 16 00
Lake Superior car-wheel...	—@ 15 25
Southern car-wheel...	—@ 16 25
Genuine Connellville coke...	—@ 5 75
West Virginia coke...	—@ 4 70

Chicago, Ill., May 30.

The market continues lifeless, and would be entirely so but for an inquiry now and then.

Sales are few and for small tonnage.

We quote f. o. b. Chicago as follows:

Lake Superior coke No. 1 fdy...	—@ \$12 00
Lake Superior coke No. 2 fdy...	—@ 11 50
Lake Sup. charcoal, Nos. 1 to 6...	13 50@ 14 00
Ohio Scotch No. 1...	15 00@ 15 50
Jackson Co., O., silvery No. 1...	14 50@ 15 50
Alabama silvery No. 1...	—@ 12 85
Southern coke No. 1 foundry...	—@ 12 10
Southern coke No. 2...	—@ 11 50
Southern coke No. 3...	—@ 11 10
Southern coke No. 1 S...	—@ 11 60
Southern coke No. 2 S...	—@ 11 35
Mannie...	13 00@ 13 50

ROGERS, BROWN & CO.

A dispatch from Mobile, Ala., states that the American steamship Matewan recently cleared from that port for Boston with 2000 tons of Birmingham pig iron.

A gentleman at Ironton, Ohio, is desirous of engaging in the jewelry business in the South, and would be pleased to correspond with parties in towns of 3000 people and over. Address No. 4 North Second street, Ironton, Ohio.

MECHANICAL.

The Pettee Works and Products.

An establishment that affords much room for interesting observation is that of the Pettee Machine Works at Newton Upper Falls, Mass. The accompanying illustrations show the plant of this concern and its products. Revolving flat

cards, drawing frames and railway heads are the specialties which are manufactured. This concern has entirely rebuilt its works in the last few years, and has been thoroughly equipped with the latest and most improved special tools and appliances adapted for the building of revolving flat cards. It is claimed that there is not any machine shop in this country or abroad that is better equipped for this special work. The following detailed information relative to the products of these works will be of interest:

REVOLVING FLAT CARD—1895 Pattern.

The dimensions of the card as follows: Cylinder, fifty inches diameter by forty inches on the wire; doffer, twenty-four inches diameter by forty inches on the wire; lickerin, nine inches diameter by forty inches on the wire; 110 flats, seven-eighth inch diameter by forty inches on the wire.

This machine has a patented improvement connected with the lickerin, lickerin screen and mote knives, which is much appreciated by all practical carders. It is so arranged that the lickerin, lickerin knives, screen, back edge of cylinder screen and back plate are capable of separate adjustment, or they can be all adjusted together, toward or from the main cylinder collectively, so that as the card wire wears, and it is found necessary to set the lickerin closer to the cylinder, one adjusting screw moves all the parts, all retaining the same individual relation to each other. This saves a great amount of time and trouble as compared with the old method of setting each of the parts separately, which necessitated taking out of the lickerin to set the back edge of cylinder screen and bottom edge of back knife plate. Every adjustment of the machine is outside of the frame and can be conveniently made.

The number of flats has been increased to 110, which gives much more carding surface and consequently a better quality of cotton. The flats are all ground from the working surface by a special arrangement.

The cards are also supplied with the Thomson patent stripping roll for winding up the flat strippings, preventing them from falling on the doffer and being taken in with the web.

The card coiler is of special design and

an improvement. It has an open top, which allows the operative to lift the cover without stopping the machine, and it can be oiled in all of its parts while running. Every time that an ordinary coiler is stopped for oiling the card is necessarily stopped, which lessens the production; but as the Pettee coiler is never stopped for oiling the production of the machine is increased. Another feat-

ing at this dial whether his sliver is running heavy or light. The head is provided with a patent arrangement on the calender rolls that delivers the sliver into the can, so that the sliver is always uniform. The distance from the delivery of rolls to the opening in the coiler plate is the same at every part of the revolution of the coiler head, thus avoiding the ordinary fault of a tight

drawing frames. These frames are either supplied with the regular Pettee roll or with the metallic roll.

PETTEE DRAWING FRAME.

Every part of the Pettee drawing frame has been designed to admit of machine fitting in place of hand fitting. All parts where possible are finished to gage and in duplicate, so as to be interchangeable and to make a more rigid and durable machine. The can turntables are detached from the frame and are designed to rest on the floor, or to let into the floor, where it is desirable to lower the frames for any purpose.

The Pettee Machine Works supplies a full can stop-motion with every frame, which, by changing a gear, will stop the frame when any desired length of sliver has been coiled in the cans. This is very useful as a means of preventing the cans from being run too full, where they are doffed systematically a whole frame at a time.

The frame is supplied with a convenient weight relief motion, so that all weight can be taken from the rolls when desired. All gears are machine cut to give smooth and silent action to the whole frame.

The Pettee Machine Works has found that it is not possible to get a perfectly true roll by making it in sections. It, therefore, makes all the long rolls from one solid bar of steel. This is a more costly method, but it insures an accurate roll. The fluting is done by special machinery built for the purpose for the Pettee Machine Works. These machines are arranged with four lengths of steel-fluted rolls, 16-inch gage. Front and back rolls are one and three-eighths inches in diameter and the middle rolls one and one-eighth inches in diameter. The coilers are arranged for 10-inch or

ure of the coiler is the hinged calender roll, which is a valuable improvement.

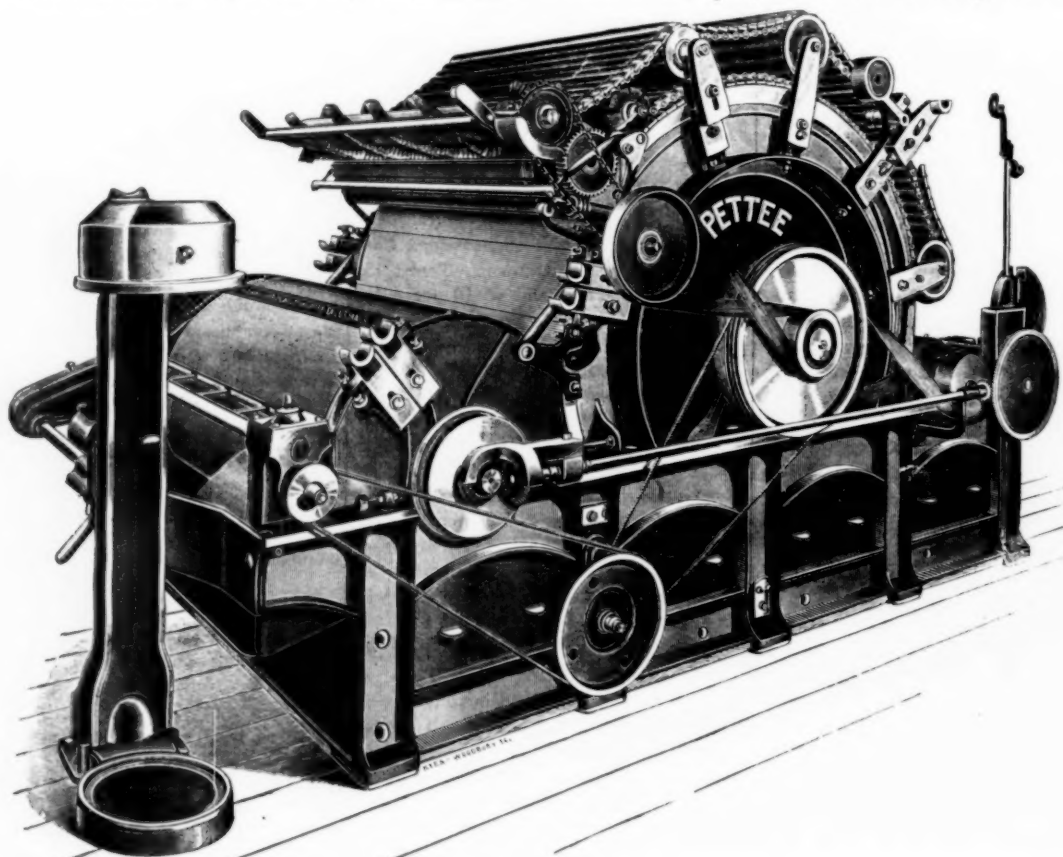
PETTEE RAILWAY HEAD.

This machine is specially made to work in connection with revolving flat cards. It has a coiler and front and back stop-motions. The machine has many patented improvements that make it desirable. The frame is strongly and rigidly made, occupying less floor space and is

and a loose place in the sliver at every revolution of the coiler.

The cones are made of iron instead of wood, and larger in diameter than formerly, thus giving a better belt surface and more positive and even driving. There is also a brake attachment, so as to immediately stop the machine from the belt shafts.

These machines are built as single or



REVOLVING FLAT CARD, 1895 PATTERN.

also lower in height than the ordinary railway head formerly used in connection with revolving flat cards.

It is provided with a patent chain-tightener, which is sensitive in its action and in which it is stated there is no possibility of "back lash." The machine is made with a dial or indicator on top of the frame, which is connected with the trumpet, so that an overseer can tell by look-

double heads. There is some advantage gained in floor space by using the double head. It is arranged to double as high as 10 into 1, and uses 10, 12 or 14x36-inch cans.

Manufacturers who are using these machines state that by using railway heads for a first process they are able to increase their doublings and obtain a more even sliver than with the process of

12-inch cans.

Cut gears and United States standard sizes are employed throughout. The Pettee Machine Works supplies three draft gears with machines, also gears to give any required tension between front rolls and calender rolls. They are arranged in frames any length, with any number of heads to a frame, and for four or six deliveries per head. The size of main pul-

ley is sixteen by three inches, and pulley on lower shaft is sixteen by five inches, and the pulley on the front roll ten by three inches. The length of belt required for front roll is, open belt, nine feet; crossed belt, nine feet four and one-half inches.

all kinds and equipping it with the very best engines for propulsion. It is intended to build steam yachts and launches, naphtha yachts and launches, electric boats of various types, also sailing crafts, and, in fact, all kinds of pleasure boats. A special department for the

vated railways. The down-town offices will, as heretofore, be at 50 Broadway.

The Samson Anvil.

This anvil combines an unusually handsome design with great strength and a very fine temper and finish.

The face is of crucible cast steel, much heavier than generally used. The horn has a solid point and a facing of tough, untempered steel, with a long, heavy shank welded underneath to the steel facing. The line "A" of the outline cut illustrated herewith shows the facing of the horn, and the dotted line "B" shows the shank welded to the facing plate and

There appears to be not much room for innovation in designing a punching press, the greater portion of which is a frame made in one solid casting.

The company which is putting this improved Stiles press on the market makes the especial claim for excellence of workmanship and the selection of each separate kind of material of which the press is constructed as the distinguishing features of its product.

Only a special mixture of iron is used in the castings, showing the greatest strength and continually tested to maintain an established standard. Every part on which the slightest wear occurs



THE SAMSON ANVIL.

extending into the anvil. The body of the anvil is of tough cast iron. These facings are very thick and heavy, to give strength to the anvil and durability to the parts in general use.

Owing to a peculiar process and skill in welding these heavy facings to the cast iron, this, it is stated, will successfully stand the most severe use.

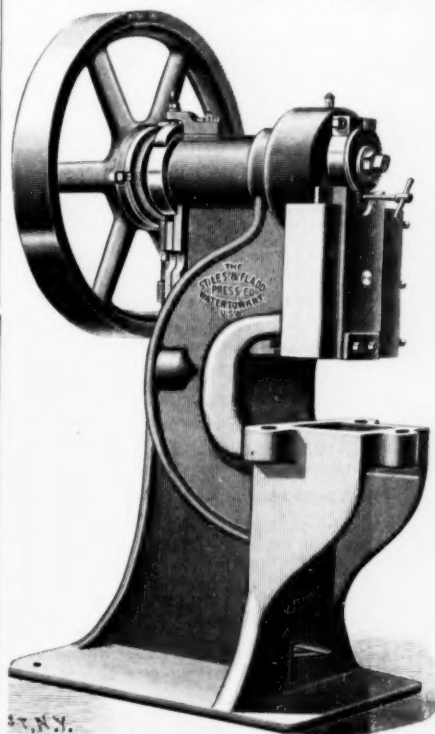
The temper is of the best character; the face is true and highly polished; the finish is superior, and every anvil is guaranteed. The Van Wagoner & Williams Co., Cleveland, Ohio, is the manufacturer.

Improved Punching Press.

The construction and designing of punching presses has reached that stage in the science where every strain has been carefully considered and the iron so placed as to best resist the strains that

is carefully scraped to an exact fit to provide a perfect bearing surface.

The ways or guides of the slide are exceptionally long to resist any side thrust. The clutch adopted by this company to be used on this press is one perfected and recently patented by the inventor of the original Stiles clutch and Stiles press, and is said to be superior in many ways to that well-known clutch. Amongst the special features are noted the ability to run the press in either direction equally well, three points of contact in the wheel causing the clutch to be practically instantaneous, the power vested in the operator to make at will a whole revolution

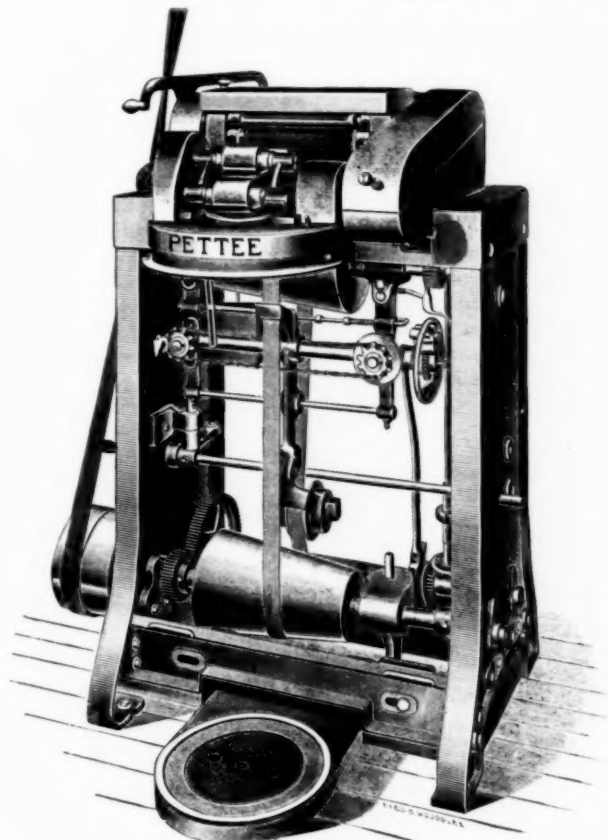


IMPROVED PUNCHING PRESS.

or only a part, as he may desire—a valuable feature in preventing accidents both of tools and operator. The clutch can be used to back out a punch that may become stuck in the die, and is claimed by the manufacturer to be the latest and best press clutch built.

These presses are manufactured by the Stiles & Fladd Press Co., of Watertown, N. Y., in six sizes weighing from 500 to 7500 pounds as fly presses, and in five sizes ranging in weight from 1200 to 8000 pounds as geared presses.

The patterns are so constructed that an endless variety of modifications and changes can be made to adapt them to special work and tools of any make.



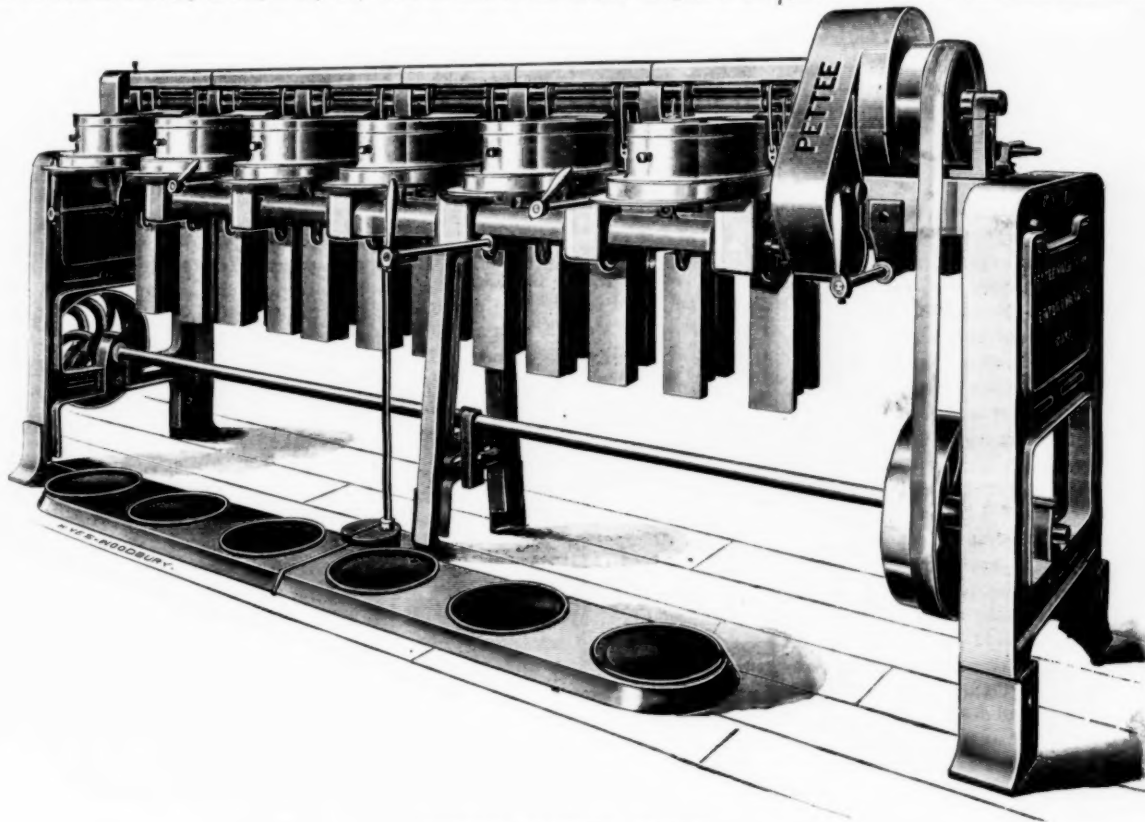
PETTEE RAILWAY HEAD.

These frames also are either supplied with the regular Pettee roll or with the metallic roll.

A Modern Marine Plant.

The announcement is made that the Gas Engine & Power Co., of New York, and Charles L. Seabury & Co., of Nyack,

construction of steel hulls will be provided. The consolidated company, with its increased facilities, will be able to take contracts for the building of marine work, such as specified, which will include the furnishing of entire machinery, hull, cabin work, etc. Several shipways will be built at the Morris Heights head-



PETTEE DRAWING FRAME.

N. Y., have consolidated their interests and are building a very large plant at Morris Heights, New York. Messrs. Seabury & Co. have made a great success in the building of high-class steam yachts, and it is the intention of the consolidated company to have elaborate facilities for constructing marine work of

quarters, also a dock designed for the winter accommodation of pleasure boats. The location is one of the most convenient in the United States for this class of work. One can reach it in seventeen minutes from the Grand Central Depot, New York, or in one hour from the lower part of the city by the way of the ele-

are brought to bear and also at the same time provide for a limit of safety. In the accompanying cut we illustrate a new punching press, which, while it follows in a general way the well-known Stiles press, still embodies such improvements as the trade demands and the knowledge of such demands is believed to warrant.

LUMBER.

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

Lumber Directory.

Readers of the Manufacturers' Record who may be in the market for lumber of any description are recommended to the directory of Southern lumber manufacturers and dealers which appears among the advertising pages.

LUMBER MARKET REVIEWS.

Baltimore.

Office Manufacturers' Record,

Baltimore, Md., June 4.

A fairly active demand for certain grades of lumber has prevailed during the past week, and the market is not materially changed. There is a good inquiry for air-dried yellow pine, but prices still rule very low. Boxmakers and planing mills are buying more freely, while the demand from builders and yardmen is also a shade better. In kiln-dried North Carolina pine there is a better volume of business, with several large sales reported. White pine is steady, with a fair demand and supply. There is some inquiry for certain grades of cypress lumber, and the market is firm, with stocks light. In the general hardwood market the volume of trade has been light, with very little demand either from local or out-of-town buyers. For export very little material is going abroad, as the European markets are quiet, and prices that rule both in the United Kingdom and on the Continent do not warrant shipments of any magnitude at present. Box factories, planing mills and other woodworking concerns are anticipating a better business in the near future, and at the moment orders are more numerous, with prices showing signs of improvement.

The following list represents the prices current at this date:

[The quotations for yellow pine are for cargo lots, and for all hardwoods the figures indicate values for choice car lots.]

VIRGINIA AND NORTH CAROLINA PINE		
5-4x10 No. 2, kiln dried.....	\$16 00@	18 00
5-4x12 No. 2, kiln dried.....	17 50@	18 50
4-4x10 No. 1, kiln dried.....	15 00@	15 50
4-4x12 No. 1, kiln dried.....	16 00@	16 50
4-4 nar. edge, No. 1, kiln dried.....	13 50@	14 00
4-4 wide edge, No. 1, kiln dried.....	17 50@	18 50
6-4x10 & 12, No. 1, kiln dried.....	23 00@	24 00
4-4 No. 1 edge floor, air dried.....	13 50@	14 50
4-4 No. 2 edge floor, air dried.....	10 50@	11 50
4-4 No. 1 12-in. stock, air dried.....	14 50@	15 50
4-4 No. 2 12-in. stock.....	12 50@	13 50
4-4 edge box or rough wide.....	8 50@	9 50
4-4 edge box do. (ord. widths).....	7 50@	8 50
4-4 edge box do. (narrow).....	6 50@	7 50
4-4 12-inch rough.....	9 50@	10 50
3/4 narrow edge.....	6 50@	7 50
3/4 wide.....	7 50@	8 50
3/4x10-inch.....	8 00@	9 00
Small joists, 2 1/2-12, 14 and 16 long.....	8 50@	9 50
Large joists, 3-16 long & up.....	9 50@	10 50
Scantling, 2x3-16 and up.....	8 50@	9 50

WHITE PINE.		
1st and 2d clear, 4-4, 5-4, 6-4 and 8-4.....	48 00@	50 00
3d clear, 4-4, 5-4, 6-4 and 8-4.....	43 00@	44 00
Good edge culls.....	14 00@	15 00
Good stock.....	16 00@	17 00

CYPRESS.		
4-4x6, No. 1.....	20 00@	21 00
4-4x6, No. 2.....	14 00@	15 00
4-4x6, 16 feet, fencing.....	11 00@	12 00
4-4x6, rough.....	9 00@	10 00
4-4 rough edge.....	8 00@	9 00
4-4 edge, No. 1.....	18 00@	19 00
4-4 edge, No. 2.....	12 00@	13 00
Gulf, 4-4, Nos. 1 and 2.....	28 50@	30 50
Gulf, 6-4, Nos. 1 and 2.....	31 50@	32 50

HARDWOODS—WALNUT.		
5-8, Nos. 1 and 2.....	65 00@	75 00
4-4, Nos. 1 and 2.....	80 00@	90 00
5-4, 6-4 and 8-4.....	85 00@	95 00
Newell stuff, clear of heart.....	85 00@	100 00
Culls.....	20 00@	30 00

OAK.		
Cabinet, white and red, Southern, plain-sawn and good, 1 and 2, 8 inches and up, 12 to 16 feet long, 4-4.....	30 00@	34 00
Quartered white, Western, 1 and 2 quality, all figured, 6 inches and up wide, 4-4.....	53 00@	55 00
Culls.....	10 00@	15 00

POPLAR.		
Nos. 1 and 2, 5-8.....	24 50@	25 50
Nos. 1 and 2, 4-4.....	28 00@	30 00
Nos. 1 and 2, 6 and 8-4.....	32 50@	33 50
Culls.....	13 00@	16 00

SHINGLES.		
Cypr., No. 1 h'ts, sawed, 6x20.....	7 25@	7 75
No. 1 saps, sawed, 6x20.....	5 50@	6 50
No. 1 hearts, shaved, 6x20.....	6 50@	7 50
No. 1 saps, shaved, 6x20.....	5 25@	5 50

LATHS.		
White pine.....	2 70@	2 75
Spruce.....	2 15@	2 25
Cypress.....	2 15@	2 25

Norfolk.

[From our own Correspondent.]

Norfolk, Va., June 1.

A marked improvement has taken place in the lumber industry of this section during the past fortnight, and the quiet and irregular trade prevailing has given place to a more decided and active demand for lumber. Manufacturers as a rule feel more encouraged, and the outlook is deemed much brighter than was anticipated sixty days ago. The limited production recently inaugurated has been in many respects a very wise procedure, and in consequence stocks, while fairly well assorted, are by no means excessive. Orders have been coming in quite freely during the past week, and there is a good demand from Northern and Eastern sources for immediate shipment. The demand is not confined to a few grades, but extends throughout the list, and at the moment manufacturers find it difficult to fill certain orders. Among the grades and dimensions which are scarce are No. 1 4-4, 8 and 12-inch stock, No. 2 4-4 edge and No. 1 5-4 edge, all of which are well sold up for some time to come. Stocks of box lumber are light, and the demand is brisk, while mills are shipping as fast as manufactured. The movement in all grades of air-dried lumber is active and prices steady, with a higher tendency on some dimensions. Planing-mill men report a good trade demand, with a corresponding improvement in prices and orders being filed in greater numbers during the past week. Other woodworking concerns throughout the city are all fully employed, and report business fairly active. Shipments have been very heavy during the past week, both by schooners and barges, some 3,000,000 feet having gone out last week. Freight rates on lumber are steady and unchanged. There is a fair offering of desirable tonnage, and rates are \$2.15 to \$2.25 to New York and sound ports, according to size of vessel, and \$2.50 to \$2.75 to Providence and Boston. Among the charters reported in New York last week were the following: A schooner, 523 tons, from New York to Charleston with coal at 70 cents, and back to New York with lumber at \$4.50, and a schooner, 350 tons, from Norfolk to New York with box shooks at \$7 and lumber on deck at \$2.25.

Savannah.

[From our own Correspondent.]

Savannah, Ga., June 1.

There is still a very active market here for lumber, and the month of May closed with a fair volume of business in nearly every avenue of this important industry. In this section of the State millmen look upon the situation as very encouraging for a good summer trade, while prices for lumber are generally very steady, and in some cases tending higher. At Cordele the Eastern demand is good, with an improvement in Western orders. It is stated that many mills are restricted in their operations for want of water. At Brunswick and Darien the volume of trade for May in lumber and timber was in the main very satisfactory, and for the current month a better business is expected. The market for all desirable grades closes for the week firm at the following figures: Ordinary sizes, \$11 to \$12; difficult sizes, \$13 to \$18; flooring boards, \$15 to \$22; shipstuff, \$16.50 to \$20, and sawn ties, \$10. Among the clearances for the week the following vessels are reported: Schooner J. E. Du Bignon for Boston with 490,204 feet of pitch-pine lumber; schooner Sarah A. Fuller for Providence with 395,065 feet; Italian bark Principe di Napoli for Cetta with 256,746 staves, valued at \$20,100, shipped by the American Stave & Cooperage Co., and schooner

May L. Crosby for New York with 428,869 feet of pitch-pine lumber. New York steamers took out 115,000 feet of lumber and 78,000 shingles; Boston, 68,000 feet; Philadelphia, 57,230 feet, and Baltimore steamers, 115,862 feet of lumber and 3021 staves. The market for freights is firm, with rates unchanged. Rates from this and nearby Georgia ports are quoted \$4.25 to \$5.50 for a range including Baltimore and Portland, Maine; railroad ties, basis forty-four feet, 16 cents; to Buenos Ayres and Montevideo, \$10 to \$11; to Rio Janeiro, \$14; steamer rates to New York and Philadelphia, \$7; to Boston, \$8, and Baltimore, \$5. Among the charters reported in New York last week are the following: A brig, 431 tons, Savannah to New York at \$4.50; a schooner, 426 tons, from Savannah to Baltimore, and a schooner, 799 tons, from Savannah to Philadelphia, on private terms, and a schooner, 812 tons, from Fernandina to Philadelphia at \$4.50.

Jacksonville.

[From our own Correspondent.]

Jacksonville, Fla., June 1.

There was a decided increase in the volume of business in lumber at this port during the month of May. The market has ruled active, with a good demand from the usual sources. Orders are more plentiful, and mills are all fully employed, with the outlook very encouraging for a fair business during the summer months. Prices for all desirable grades of lumber are firm, with a tendency towards a higher range, and, in fact, for all dimensions holders are firm, and refuse to make any concession from the list figures. Lumber continues to be the chief foreign and domestic export. The total shipments of lumber for the month of May amounted to 8,594,000 feet to coast-wise ports, and during April the shipments amounted to 7,300,000 feet, showing an increase of 1,294,000. Shipments of yellow-pine lumber amounted to 7,363,000 feet, cypress lumber 1,231,000 feet, shingles in bulk 1,152,000 and in bundles 21,700, and cross-ties 17,000. The foreign exports of lumber were 185,928 feet. Among the clearances last week were the following vessels: Schooner John W. Hall for New York with 300,000 feet of lumber; schooner Maud H. Dudley for New York with 350,000 feet of yellow-pine lumber; schooner Amelia P. Schmidt for Atlantic City, N. J., with 251,000 feet of yellow-pine lumber. The schooner Governor J. Y. Smith was loading with yellow-pine lumber on the 28th ult. for Cuba, and sailed today. The market for lumber charters is quiet, with a moderate offering of handy-sized tonnage. Rates to New York and sound ports are unchanged. Charters are reported of three schooners, 358, 395 and 430 tons, taken last week, Jacksonville to New York at \$4.90; a schooner, 380 tons, at \$4.90, and a schooner, 340 tons, Jacksonville to New York at \$5.

Mobile.

[From our own Correspondent.]

Mobile, Ala., June 1.

A better trade demand has ruled throughout the lumber and timber market, and the volume of business has shown considerable expansion during the past week. In lumber especially there has been a better movement, and a number of orders have been received at the mills in this section. Prices, as a rule, are a shade firmer, but not notably higher, while stocks are fairly well assorted and fully ample for the demand. Several good orders have been received from South American ports, but trade with Cuba and Mexico is dull. The timber trade holds up well, and the market for both hewn and sawn timber is firm, with stocks in some cases light. Sawn

timber is still quoted 11 to 11 1/2 cents per cubic foot, forty feet basis. There is a fair demand for cypress at 5 to 8 cents per cubic foot. Saw logs delivered at the mills are quoted at \$5 to \$7 per 1000 feet. Hewn timber when placed upon the market will bring 12 cents on basis of 100 cubic feet, average B1 good. There is no demand for hewn oak. Among the shipments during the week the following vessels are reported: Bark Enterprise for Liverpool with 31,734 cubic feet of sawn timber and 35,559 cubic feet of hewn; bark Bisnard for Diefzyl with 11,924 cubic feet of hewn timber, 41,658 cubic feet of sawn timber and 10,063 superficial feet of lumber; bark Atlantic for Algoa Bay, Africa, with 59,622 cubic feet of sawn timber and 7400 feet of lumber. The steamer Elizabeth cleared for Buenos Ayres with 933,585 feet of lumber. Other shipments of lumber aggregated 266,960 feet. The total shipments of lumber from September 1, 1895, to May 30, 1896, amount to 46,517,495 feet, against 45,594,149 feet for the corresponding period in 1894-95. The total shipments of hewn timber for the same period amount to 966,328 cubic feet, against 1,172,136 cubic feet last year, and sawn timber, 1,533,877 cubic feet, against 2,511,177 cubic feet in 1894-95. The market at Pensacola, Fla., is reported quite active, the shipments during the past ten days being larger than usual. The exports reported to foreign ports were 5,387,000 superficial feet of lumber, 3,260,000 superficial feet of sawn timber, 184,164 cubic feet of hewn timber, 389,000 cubic feet of sawn timber and 2155 cubic feet of oak timber.

New Orleans.

[From our own Correspondent.]

New Orleans, La., June 1.

The general conditions of trade throughout the lumber industry in this State have been subject to few material changes during the month of May. In general the current trade has been quiet, with a moderate demand, and in Eastern Louisiana, Mississippi and Alabama the inquiry has been mainly for car and railroad material. The demand for building material has been slow, and in consequence stocks prepared for the future demand when it sets in. As to prices, they have, to say the least, been at rock bottom, and for the manufacturer the margin of profit is narrow. The outlook, however, on all sides is hopeful, and the most expert authorities in the trade look forward to an increased demand in July or August. The tendency among manufacturers is for a more perfect and permanent organization than that now in existence, and the more united millmen become on the disposition of their lumber the stronger the market will rule. There is a good export demand both here and at all Gulf ports, and there is a good movement in building material expected after the present harvest is over. The market for cypress is in a very satisfactory condition, and all the mills are running regularly, with the output slightly in advance of the current demand. Shingles are steady, with a moderate demand and stocks fully ample for all requirements. Taking the market as a whole, there is every reason to look for a tide of activity during the summer and fall of the present year, as with the present decided demand for lumber for export, railroad requirements and flattering prospects for a bountiful crop, every obstacle to restrict trade will have been removed. The building demand for material has been active during the past month, and architects and contractors are predicting a busy season. The sash, door and blind factories report an increase in the current demand, and from the amount of building

now going on there will be more than an average business in this line during the summer.

Beaumont.

[From our own Correspondent.]

Beaumont, Texas, May 30.

Your correspondent is pleased to be able to report a somewhat better condition of affairs this week than was the case last week. While it is true that prices have not advanced, yet the volume of business transacted is considerably more than that done for last week or the week before. Quite a number of orders have been received by the mills in this district, and while they are not for any large number of cars individually, yet in the aggregate they total up considerably. An increase of business is noted at Orange, and specifications have also come in quite freely to the mills located on the East Texas road. The sentiment is that the hardest part of the lumber season has been passed over during the first three weeks in May, and it is now hoped that matters will assume a more favorable turn from this time forward.

The timber demand keeps up wonderfully well, and at Beaumont and Orange the mills are well supplied with all they can handle of this class of stock. The contract has been let for the extension of the Pittsburg, Kansas City & Gulf road, and this will mean that the Beaumont mills will secure the bill of timbers and ties for the thirty miles which have been let. In addition to the timber specifications now on the books, both for interior and foreign shipment, this will keep the Beaumont mills, and possibly some of the East Texas mills, very busy for the next three months.

Shingles are not in much demand, and what few are being sold are going from the mills of manufacturers whose ideas of value are not so exalted as are the ideas of the mill at this point and the two plants at Orange. There are large stocks on the yards of the different mills now, and these are all dry and in first-class condition for shipment.

Sash, doors and blinds still pursue the even tenor of their way, and do not seem to be ruffled in the least by the disturbing elements which are playing to such good effect in other departments of wood manufacture.

There have been no new orders of any extent booked by the mills here for foreign shipment. They are getting out the material which was booked some time ago, and are working hard to get out a first-class quality of stock, that will be acceptable to the foreign merchant to whom the stock goes. Next week an inspector will be here to look over the material that is to go to Germany and England, and the mills will then know how successfully they have interpreted classifications received on this material. Mention was recently made in these columns of shipments that were recently made by the Reliance Lumber Co. to Europe for the purpose of showing foreign buyers what quality of material the mills turned out here. In this connection it is in order to announce the departure of Mr. Mark Weiss, of this company, for England, where he will receive the recent shipments and see that they are properly disposed of. Mr. Weiss will also make a tour of Europe while he is absent, visiting the principal cities of the Old World, and incidentally combining business with pleasure by carefully noting the different conditions which govern the various lumber markets of the Old World. His friends wish him a pleasant and prosperous trip, and hope that he will enjoy the trip to the utmost.

Relative to the many articles that have recently appeared in various industrial

journals about the depth of water on Sabine Pass bar, it will be gratifying to the observer of conditions at this port to know that the first big steamship has made its appearance in the harbor, namely, the "Pensacola," which will carry some 1,100,000 feet for the Litcher & Moore Lumber Co., of Orange, from Sabine to New York.

Mr. J. B. McMahon, of the Beaumont Lumber Co., spent a day in Houston during the week.

Mr. Sam Park, Mexican agent for the Consolidated Export Lumber Co., and Mr. J. F. Keith, vice-president of the Texas Tram & Lumber Co., took a little trip to Sabine Pass during the week.

Mr. H. D. Keith, of the Long Manufacturing Co., was in Houston during the week.

Mr. Geo. Bancroft, of the Bancroft Lumber Co., Orange, who has been out in the State for the past three weeks rustling up orders for his firm, passed through here this week on his way home. Mr. Bancroft was quite successful in securing orders for his firm, and he reports that he found crop conditions in a much better state than he had anticipated.

The schooner "Annie Root" arrived in Orange Tuesday from Corpus Christi to load another cargo of material for the Mexican National Railroad, from the mills of the D. R. Wingate Lumber Co.

The schooner "Warren Adams," now discharging at Galveston, will soon be due at the Pass to load ties for the Litcher & Moore Lumber Co. to go to the crosscutting works at Brooklyn.

The schooner "Martha" is now loaded at Tuxpan with mahogany logs for the firm of Cummins Bros., Houston, and after discharging this she will proceed to Orange to load a cargo of railway material for one of the Mexican roads.

Mr. Sam Park, general agent in Mexico of the Consolidated Export Lumber Co., returned home last night, after having paid a very pleasant visit to the mills here.

Lumber Notes.

A. H. Conker's planing mills at Charleston, W. Va., which have been idle for some months, resumed with a full force on Monday last.

The foreign exports of wood and its products from the port of Baltimore for the month of May were as follows: Lumber, 3,858,000 feet; logs of wood, 6872, and staves, 118,000.

The lumber plant of Pettit & Co. at Henters, W. Va., a station on the West Virginia & Pittsburg Railroad, was destroyed by fire on the 30th ult. The loss is estimated at \$50,000.

The Warren Land & Lumber Co., of Warren, Texas, has established an agency in Houston, with Mr. J. J. Johnstone in charge. The company has about 7,000,000 feet of lumber on hand.

The Ensign Lumber Co., of Cordele, Ga., recently purchased a fine body of round timber in Dooly county, Georgia, from S. F. Harks, of Wellsville, N. Y. It is all virgin pine, never having been turpintined.

A charter was granted last week to the W. G. Ragley Lumber Co., of Winsboro, Wood county, Texas. The capital stock is \$50,000. The incorporators are W. T. Whitman, of Greenville; W. G. Ragley and Andy Pryor, of Jefferson.

The Crane Lumber Co., of Frankfort, Mich., has leased a water frontage of 1000 feet at Mobile, on which a planing mill will be erected. The company is said to have leased several thousand acres of timber land in the vicinity of the city.

The Reliance Lumber Co. will ship several carloads of clear finish by the steam-

ship Galicia, now loading for Hamburg. The Reliance Lumber Co. has now placed samples of lumber on the markets of Liverpool, Antwerp and Hamburg.

There is a good Eastern and Western demand for lumber at Cordele, Ga., and millmen are much encouraged by the outlook. Carter & Wallace's saw mill at Warwick, Ga., was burned on the 26th inst.

The big sash, door and blind factory at Litcher, La., is being pushed rapidly toward completion, and nearly all the machinery is on the ground. This will be one of the most extensive plants of the kind in the country and the largest in the South.

It is stated that an immense tract of timber and coal land in Nicholas county, West Virginia, has been sold, through Major W. H. Hill, of Camden-on-Gauley, to an English syndicate for \$250,000. Work on its development will commence at once.

The planing mill of the Clark Lumber Co., of San Mateo, Fla., was burned on the 27th ult. There were 350,000 feet of lumber in the yard at the time, all of which was destroyed. The loss will amount to upwards of \$6000, with no insurance.

The total lumber shipments from the port of Jacksonville, Fla., for the month of May were 8,774,298 feet, of which amount 185,298 feet was foreign; cypress lumber, 1,231,000 feet; shingles in bulk 1,152,000, and in bundles 21,700, and crossies 17,000.

Messrs. Wiley, Miers & Co., of Lake Charles, La., began operating their shingle mill on the 29th ult. This plant has a capacity for sawing 100,000 shingles per day, and is located on the Calcasieu river just above the city. They will manufacture nothing but shingles.

It is reported that the Red Cypress Lumber Co., of Patterson, La., whose plant has been in course of construction for some time, will be pushed to completion without further delay. The Filer & Stowell Co., of Milwaukee, Wis., has contracted for the equipment of the plant.

All the timber in the navy-yard basin at Portsmouth, Va., has been sold to a New York firm, and will shortly be taken out of the water, where it has been submerged for thirty years. The wood is said to be in an excellent state of preservation and will be used in shipbuilding.

The Millburn-Bass Wagon Co. at Chattanooga, Tenn., commenced operations last week, and by the middle of June the company expects to have its full force of hands at work. When the plant is in full operation it will turn out between 400 and 500 wagons every month.

It is announced that the policy of the new management of the Ravenswood, Spencer & Greenville Railroad will be more liberal in future in the extension of lower rates to the lumbermen of West Virginia. The road is a heavy producer of staves, hoops, lumber and railroad ties.

The steamship Pensacola, owned by the Louisville & Nashville Railroad, is now at Sabine Pass, Texas. The Pensacola is under charter by the Litcher & Moore Lumber Co. to take a cargo of lumber to New York. She will take out 1,100,000 feet on account of the big bill for the Chicago Elevated Railroad.

It is stated that Mr. T. B. Crary, of Binghamton, N. Y., has been recently surveying the Love lands near Waynesville, N. C. Mr. Crary is one of the owners of this large body of mountain land, and it is the intention of the company to establish at an early date several saw mills and tanneries to utilize the timber.

The plant of the Kentwood Box Manu-

facturing Co., of Kentwood, La., was entirely destroyed by fire on the 25th ult. There was no insurance on the buildings or stock, of which there was about \$2000 worth on hand. The company valued its plant at \$10,000, consisting of buildings, machinery and 750 acres of timber land.

The receipts of lumber at the port of New Orleans during the week ending May 28 were 1,606,500 feet, and since September 1 they aggregate 75,023,128 feet, against 62,490,390 feet for the corresponding period last year. Receipts of shingles for this week were 128,000, laths 150,000, oak staves 75,400 and cypress staves 86,000.

Woodworking concerns of Germany are making inquiries through the commercial department of the Imperial German Consulate at Chicago for estimates on Southern oak for flooring and cabinet making. Manufacturers of oak staves, bottoms, etc., who are anxious to cultivate a trade with Germany can address the Imperial German Consulate at Chicago.

The Stimpson Lumber Co., at Newberne, N. C., is having an active demand for lumber. Its dry-kiln is already blocked and the plant has shut down for several days to provide room for lumber. Six vessels were loading last week, all chartered by the company. Its shipments went to Philadelphia, Atlantic City, Chelsea, Mass., and points in New Jersey.

The lumber industry at Fernandina during the month of May showed up fairly well under existing conditions. The total shipments aggregated 4,871,026 feet, of which 1,283,065 feet were coastwise and 587,961 feet foreign, distributed as follows: Boston, 1,814,000 feet; Philadelphia, 963,000 feet; New Haven, 357,000 feet; Fall River, 420,000 feet; Hackensack, 322,100, and New York, 376,965 feet; St. Lucia, W. I., 322,961 feet, and Trinidad, 255,000 feet.

A quarterly meeting of the governing committee of the Baltimore Lumber Exchange was held on Monday last, when Mr. Wm. W. Wilson, Jr., was elected a member of the committee to succeed Mr. Ridgway Merryman, who resigned. A resolution was adopted calling for an explanation of the action of several Eastern lumber organizations which suspended a number of Baltimore firms on the charge of infraction of rules in making sales. Mr. Richard Price presided at the meeting, and the others present were Messrs. E. B. Hunting, Samuel P. Ryland, A. Courick, W. J. Lawton, Frank Gilbert, P. M. Womble and Chas. J. Stran, Jr.

Southern Sidelights. By Edward Ingle, 375 pages. T. Y. Crowell & Co., New York city.

This is a recent addition to the library of economics and politics, issued by these publishers and edited by Prof. Richard T. Ely, the well-known authority. The scope of this book is indicated by chapters on the traits of the Southern people, where cotton was ruler, phases of industry, trade and commerce, the educational situation, literary aspirations, plans for progress, social, economic and political aspects of slavery, and the war crisis. An appendix gives tables of statistics relative to the growth and products of the country. The book evidences that the author has been painstaking and thorough in his work. He has compressed into handy shape an interesting and comprehensive review of the South, and his sidelights convey practical information about a section whose greatness broadens as its people, its institutions and its resources are better understood.

CONSTRUCTION DEPARTMENT.

THE MANUFACTURERS' RECORD seeks to verify every item reported in its Construction Department by a full investigation and complete correspondence with everyone interested. But it is often impossible to do this before the item must be printed, or else lose its value as news. In such cases the statements are always made as "rumored" or "reported," and not as positive items of news. If our readers will note these points they will see the necessity of the discrimination, and they will avoid accepting as a certainty matters that we explicitly state are "reports" or "rumors" only. We are always glad to have our attention called to any errors that may occur.

*Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery Wanted."

In correspondence relating to matters reported in this paper, it will be of advantage to all concerned if it is stated that the information was gained from the Manufacturers' Record.

ALABAMA.

Anniston—Bobbin Factory.—T. W. Belsher contemplates erecting a bobbin and spool factory.*

Gadsden—Telephone System.—The Bell Telephone Co. will construct a new telephone exchange.

Jasper—Telephone System.—The Jasper Telephone Exchange will be organized in the near future and will buy equipment.*

Montgomery—Dry-kiln Works.—A company is now being organized for the purpose of making and introducing a patent dry-kiln invented by Lafayette Moore. W. B. Davidson can be addressed.

Riverside—Cotton Mill.—There is talk of the erection of a cotton mill. R. W. Alford can be addressed.

Riverside—Ginnery, etc.—J. R. Coleman is erecting a grist mill and ginnery.

ARKANSAS.

Little Rock—Construction Company.—W. B. Worthen and others have incorporated the Hartford Construction Co., with a capital stock of \$250,000, for the purpose of constructing railroads, bridges, etc.

Little Rock—Book Bindery.—The Arkansas Book & Paper Co. has contracted with Paul M. Heerwagen to manufacture and introduce the Heerwagen patent wire covering for books.

FLORIDA.

Miami—Bridge.—The Florida East Coast Railway Co. (J. R. Parrott, vice-president, St. Augustine, Fla.) contemplates the construction of a bridge 250 feet long across the Miami river; to be constructed to accommodate trains and carriages, of steel girders, with draw.

Ocala—Ginnery, etc.—George Giles & Co. have erected buildings for the ginnery and grist mill reported last week; plant will cost \$10,000.*

Starke—Electric-light and Ice Plant.—The erection of an electric-light and ice plant is talked of. George Thompson can give information.

Tallahassee—Cigar Factory.—D. M. Waterman, William Sheek, J. Riera, J. F. Goodall and C. E. Spencer have incorporated the Havana Cigar & Cigarette Co., with a capital stock of \$10,000.

GEORGIA.

Atlanta—Watch Factory.—E. R. Black, S. R. Peck and others have incorporated the Atlanta Watch Co. for the purpose of making and selling watches; capital \$3000.

Canton—Gold Mine.—R. W. Walker is continuing development of gold-bearing lands near Canton.

Columbus—Woolen Mill.—The Eagle & Phoenix Manufacturing Co. will locate the new woolen plant mentioned last week on the Alabama side of the river. The plant is to be an eight-set one, costing \$150,000, and will employ 200 hands.

Cordele—Timber Lands.—The Ensign Lumber Co. has bought a large tract of timber land near Cordele and will develop same.

Fitzgerald—Cannery.—The Fitzgerald Canning & Pickling Co. has been organized, with a capital of \$2000, privilege of increase to \$5000. A cannery of 10,000 capacity daily will be established. Mr. Shumway is president. Machinery equipment has been ordered.

Grovia—Oil Mill.—The Grovia Oil & Fertilizer Co. has placed an order for new heater, cake former, crushing rolls and other machinery.

Hawkinsville—Electric Lights and Water. The city will vote June 17 on constructing water and electric-lighting plants. Address the mayor.

Lithia Springs—Cotton Mill.—A company will be formed to erect a 3000-spindle cotton mill. Joe James, Columbus Blair, Camp Strickland and J. A. Watson, all of Atlanta, are interested.

Macon—Telephone System.—The Macon Telephone Co. will be organized, with a capital stock of \$100,000, by Simon Baer, of Atlanta, and others.

Milledgeville—Telephone System.—C. W. Richter and associates, noted last week, have incorporated the Milledgeville Telephone Exchange, with a capital stock of \$4000.

Newnan—Machine Works.—The R. D. Cole Manufacturing Co. is adding some machinery to its plant, including boilers and engines, etc.

Rome—Rolling Mill.—Harper Hamilton has closed a contract whereby Charles T. Ball, of Cartersville, Ga., and Mays Ball will put in operation the Rome rolling mill. The plant makes cotton ties, and is said to be the only one of its kind in the South.

Savannah—Car Works.—The new Georgia Car & Manufacturing Co., already noted as to erect a plant, has applied for charter. The incorporators are John J. McDonough, John Flannery, P. J. O'Connor, M. A. O'Byrne, J. G. Blain and M. C. Blain. The capital stock is \$500,000, of which \$100,000 will be paid in at once, and bonds for \$100,000 will be issued. The company will at once erect the necessary buildings. John A. Sullivan being the superintendent for the work, and when these are completed a car plant at Huntington, Pa., will be removed to Savannah, same having been previously purchased, and is said to be worth \$250,000. The company's plant will include shops for the manufacture and repair of railway cars, wheels and axles being bought for the present, foundries and forges to be added later on; also a wood vulcanizing plant. It is understood that Mr. McDonough will be elected president, and Mr. O'Byrne, secretary-treasurer.

Tifton—Bakery.—John Wurrow will erect a bakery.

KENTUCKY.

Bowling Green—Stone Quarries.—The North American Lithographic Stone Co. has closed a deal for a tract of land near Bowling Green, on which it will develop stone quarries. Address care of secretary of Commercial Club.

Earlington—Saw Mills.—S. E. Stevens has added equipment to his saw mill.

Flatlick—Coal Lands.—It is reported that the Exporting Cannel Coal Co. intends to develop 20,000 acres of coal lands in Knox county, and is now surveying a railroad to the property preparatory to commencing operations.

Jackson—Bridge.—There is talk of the construction of a bridge across the Kentucky river. Address the mayor.

Louisville—Canal.—Capt. J. G. Warren, U. S. A., now in charge of the Louisville and Portland canal, will shortly recommend to the government War Department the construction of a canal gate to cost about \$40,000.

Newport—Electric Plant, etc.—The Cincinnati, Newport & Covington Street Car Co. will erect a large plant at Newport. The plant will include shops, sheds and offices, with entire equipments of the very latest machinery of all kinds for street railway companies. It is also intended to heat the

cars by hot water according to a new system, and the apparatus for same will be made at the new plant. It is said that this new plant will cost complete about \$1,000,000.

Owensboro—Cellulose Factory.—The Marsden Cellulose Co. has made a proposition to the city for the erection of a new and larger factory, triple the size of present one.

Owensboro—Cellulose Factory.—The Marsden Cellulose Co. intends to erect a new factory three times the size of the present one; about \$100,000 to be expended on buildings and machinery for the new plant.*

Paducah—Woodenware Factory.—The Kentucky Pail & Tub Co. has been organized for the manufacture of pails, tubs, etc. For further information address Evert Thompson, Indianapolis, Ind.*

Shelbyville—Creamery.—Ewing & Son, Eighth and Main streets, will establish a creamery.

Somerset—Machine Shops.—While nothing definite has as yet been announced regarding the rebuilding of the Queen & Crescent Route machine shops, recently burned, it is probable that larger shops than the old ones will be erected in the near future; A. Bull, resident engineer at Somerset; Samuel M. Felton, receiver, Cincinnati, Ohio.

Winchester—Coal Mines.—The coal lands recently purchased by R. R. Hutchcraft will be developed, a company having been organized for the purpose. The lands consist of about 25,000 acres of coal lands (cannel), and preparations for development will be made at once.

LOUISIANA.

Lake Charles—Shingle Mill.—Wiley, Miers & Co. have started operations at their shingle mill of 100,000 daily capacity.

New Orleans—Manufacturing Industries. George C. Power, industrial commissioner of the Illinois Central Railroad, has completed arrangements recently for the location of a number of industrial enterprises on the line of the Illinois Central. The plants will be erected soon, and include creameries, shirt-waist factory, canneries, lumber mills, etc. Address Mr. Power at Chicago.

New Orleans—Electric Plant.—The Canal & Chalborne Street Railway Co. (J. H. De Graube, president) will arrange for the erection of its proposed electric-power house.

New Orleans—Mercantile.—The L. Pilger Co., Limited, has been incorporated, with capital stock of \$20,000; Mrs. L. Pilger, president.

New Orleans—Brush Factory.—The Buchel Brush Co. has been incorporated, with a capital stock of \$7000, for the manufacture of brushes, brush machines, etc.; Jules Buchel, Frank McGloin and Emile Buchel, directors.

Shreveport—Cotton Mill.—Howard Cole has completed arrangements which ensure the erection of a cotton mill equipped with 10,000 spindles and 247 looms, to be owned and operated by J. F. Keeney & Co., of Chicago, Ill., and associates; will manufacture sheetings, shirtings, bagging, etc.

Shreveport—Foundry.—Arrangements have been about completed for the removal of the foundry of D. M. Henderson, of Jefferson, Texas, to Shreveport. The plant will represent capital of about \$40,000. Address care of Howard Cole.

MARYLAND.

Baltimore—Steamboat Company.—The Moseley Steamboat Co. has been incorporated, with a capital stock of \$20,000, by Frederick M. Moore and others.

Brunswick—Water Works.—The city has voted adversely on the proposition for \$15,000 water-works bonds.

Cumberland—Cement Plant.—The Cumberland Hydraulic Cement Co. is remodeling its plant for the manufacture of Portland cement under the direction of Joseph Miller.

Frederick—Electric Plant.—The Frederick & Middletown Electric Railway will not erect a power plant, as was at first intended, but has made a contract with A. L. Bosley to be supplied by the Frederick Electric Plant.

Hagerstown—Water Works.—The Hagerstown Water Co. will extend its system. About \$40,000 will be expended.

Ocean City—Steel Pier.—The Steel Pier & Railway Co., capital \$50,000, will construct a steel bridge, with over 200 yards of same extending into the ocean. Address care of

Edw. Stabler, Jr., of Guardian Trust Co., Baltimore, Md.

Oxford—Water Works.—There is talk of constructing water works. Address town clerk.

Snow Hill—Telephone System.—The Snow Hill Telephone Co. has been incorporated by George S. Payne and others to construct a telephone line.

St. Michaels—Water Works.—The construction of water works is talked of. Address the town clerk.

Timonium—Land Improvement.—Baltimore and Philadelphia parties have purchased and optioned 600 acres of land near Timonium, which it is contemplated to improve for a suburban residence site. As soon as \$400,000 has been subscribed the Carlsbrooke Land Co. will be formed to develop the property as outlined. R. A. McCormick, of Baltimore, can be addressed for further information.

Trappe—Water Works.—There is talk of water works being constructed. Address town clerk.

MISSISSIPPI.

Clarksdale—Cotton-oid Mill.—A \$25,000 cottonseed-oil mill will be erected, contract having been let to C. H. Dabbs and T. S. Logan, of Meridian, Miss.

Stonington—Brick and Pottery Plant.—Hirsch & Co. have bought the Stonington brick and pottery plant for \$16,000.

MISSOURI.

Joplin—Lead and Zinc Mines.—The Central Mining Co. has located forty acres of mining lots, and is opening shafts of lead and zinc ore.

Liberty—Water Works.—There is talk of water works being constructed.

NORTH CAROLINA.

Albemarle—Cotton Mill.—The Edrd Manufacturing Co. has been organized with a capital stock of \$75,000 to erect a cotton mill; J. W. Cannon, of Concord, N. C., is president, and John S. Edrd, secretary-treasurer.

Gastonia—Tannery.—The Gastonia Tanning Co. will rebuild its plant recently burned. At present only enough of the plant will be erected to save the stock now in vats, and later on will be completed.*

Greensboro—Mattress Factory.—J. C. Calum, of High Point, will remove his plant to Greensboro. Mattresses, lounges and excelsior will be made.

Hartland—Gold Mine.—T. H. Higgins, of Lenoir, N. C., is developing a gold mine near Hartland.

Hillsboro—Shoe Factory.—Arrangements have been completed for the establishment of the Farmers' Alliance shoe factory, previously reported; machinery for same has been ordered. Address Brose Hileman for further information.

Kinston—Electric Lighting.—The city will contract for electric lighting by twenty-five 2000 candle-power lamps. Address the mayor.*

Morganton—Bridges.—The county commissioners will build two iron bridges in the near future, one across the Catawba river and one across the John's river.*

North Wilkesboro—Furniture Factory.—J. L. Turner will engage in the manufacture of furniture.*

Raleigh—Bridge.—The Southern Railway (C. H. Hudson, chief engineer, Washington, D. C.) will construct a new bridge across streets at Raleigh.

Stony Hill (P. O. at Parsonville)—Lead and Silver Ores.—Report says that lead and silver ore deposits have been found on L. C. Yates's property.

SOUTH CAROLINA.

Abbeville—Electric-light Plant.—The city council has appointed a committee to investigate cost of erecting an electric-light plant.

Alken Junction (P. O. at Alken)—Cotton Mill.—The company of Charles W. Davis, of Graniteville, S. C., and others, reported several months ago, will be known as the Warren Manufacturing Co. Arrangements are now being completed for the erection of a 20,000-spindle plant, as contemplated; capital placed at \$400,000.

Anderson—Water-power Development.—Dr. Orr, J. N. Brown, R. S. Hill and others propose the development of Portman shoals for water-power.

Beaufort—Water Works.—The Beaufort

Water Works Co., reported last week, has formally organized, with George Holmes, president; J. N. Wallace, vice-president, and Wm. P. Waterhouse, secretary. Work on constructing the proposed plant has been commenced; capital placed at \$10,000.

Blacksburg—Well-fixture Company.—A. L. White and others have incorporated the Southern Well Fixture Co., with a capital of \$10,000.

Columbia—Elevator Works.—The Plumer Water Elevator Co. has been incorporated with a capital stock of \$100,000 for the purpose of manufacturing water-power elevators, ice machinery and refrigerators. E. C. Plumer, C. H. Manson, J. C. Seegers and others are the incorporators.

Columbia—Cotton Mill.—There is a movement on foot for the organization of the Broad River Cotton Mills, with a capital stock of \$150,000, and subscription books have been opened. A 10,000-spindle plant, operated by water-power, is contemplated. T. A. McCreery, George A. Shields, J. P. Richardson, W. B. Smith Whaley, W. B. Lowrance, S. A. Pearce and Jos. W. Muller are incorporators of the company.

Florence—Knitting Mill.—There is a movement afoot for the formation of a knitting-mill company of \$10,000 capital. About one-half the stock required has been subscribed.

Greer Depot—Oil Mill.—There is a movement afoot for the erection of a cottonseed-oil mill.

Jonesville—Knitting Mill.—The new Jonesville Knitting Mill has commenced operations with eighty-six machines, and 135 needle machines are still to be put in.

Landrum—Cotton Mill.—The Landrum Cotton Mills, recently chartered, will soon organize and arrange for the erection of a mill. Capital stock is \$100,000. S. B. Ezell is treasurer.

Laurens—Electric-light and Water System.—The city voted May 30 for the issuance of \$30,000 in bonds for the construction of water works and electric-light plant. Address the mayor.

Mayesville—Tobacco Company.—The Pudding Swamp Tobacco Co. has been incorporated, with W. D. Gamble, president; A. T. Buddin, vice-president, and A. A. Strauss, secretary-treasurer.

Rock Hill—Steam Laundry.—Thomas Robertson has established a steam laundry.

Spartanburg—Broom Factory.—W. S. & J. R. Petty have established a broom factory.

Sumter—Cotton-oil Mill.—The Sumter Cotton Oil & Fertilizer Co., reported last week as incorporated, has a capital of \$20,000, and will erect a 30-ton mill at a cost of about \$18,000.*

Yorkville—Telephone System.—W. B. Moore has applied for franchise for telephone system.

TENNESSEE.

Brushy Mountain (not a postoffice)—Coke Ovens, etc.—The site has been definitely located for the coke plant to be built by the State Prison Commission, W. M. Nixon, chairman, (address Nashville, Tenn.) A large dam will be constructed for water supply; cost of coke plant to be about \$15,000.

Chattanooga—Iron Works.—O. H. Orton has purchased an interest in the Ornamental Iron Works (241 Montgomery avenue). Operations will be extended and a patent iron chicken coop made.

Chattanooga—Fence-machine Company.—P. A. Brawner, J. G. Rawlings and others have organized a company to manufacture and sell a patent fence machine for farmers' use.

Chattanooga—Planing Mill.—The Lookout Planing Mills, recently burned, will probably be rebuilt.

Chattanooga—Tannery.—There is no truth in the rumor mentioned last week that the United States Leather Co. will erect another tannery.

Chattanooga—Safe Works.—The Acme Safe Co., manufacturer of kitchen safes and bedsteads, will erect another factory to replace the one recently burned. Address J. A. Campbell, of the company.*

Chattanooga—Oil Mill.—The Chattanooga Cotton Oil Co. intends to enlarge its plant, putting in new boiler and engine, rollers, etc., at a cost of \$2500.

Knoxville—Electric Plant.—The Citizens' Street Railway Co. has let contract to Galfon & Seldon for the erection of the necessary building for their new electric-power house.

Knoxville—Electric Plant.—The Mutual Light & Power Co., lately noted as to erect electric plant, has been incorporated by J. B. Harrison, A. B. Shelding, Alex. McMillan, D. M. Haynes and J. L. Davis; order has

been placed for engines, boilers, electrical equipment, etc.

Knoxville—Cotton Mill.—The Knoxville Woolen Mills has placed order for the 5000 spindles for its additional mill now building.

Memphis—Medicine Factory.—R. S. Lipscomb and others have incorporated the R. S. Lipscomb Manufacturing Co. to manufacture medicines, etc.

Morristown—Electric-light Plant.—There is talk of the erection of an electric-light plant. W. A. Jones can possibly give information.

Oakdale—Stave Mill.—The Oxley Stave Co., of Lexington, Ky., will remove its plant to Oakdale, so it is reported.

Sherwood—Lime Works.—The Gager Lime Works will enlarge the capacity of its plant; capacity now 500 barrels daily; to be increased to 1200.

Strawberry Plains—Marble Deposits.—Deposits of fine marble are said to have been found on the farm of John L. Meek.

TEXAS.

Austin—Bottling Plant.—The Santa Monica Co., reported last week, is bottling mineral waters, and may put in a larger bottling plant in the near future, including carbonating machines; H. B. Beck, manager.*

Beaumont—Lumber Mill.—The Reliance Lumber Co. is adding more machinery; orders all placed.

Celeste—College.—G. L. Marshall and others have incorporated the Hawthorne College and School of Music, with capital stock of \$30,000.

Fort Worth—College.—The medical department of Fort Worth University, capital stock \$30,000, has been incorporated.

Garrison—Coal Mines.—Rumor says that Z. B. Garrison will sink a shaft for coal.

Gladys—Oil Well.—The Texas Oil & Mineral Co. is drilling for oil and gas.

Hillsboro—Jewelry Company.—L. H. Walter and others have incorporated the Walter & Hafner Jewelry Co., with a capital stock of \$20,000.

Houston—Transportation Company.—John F. Dickson and W. G. Sears, of Houston, and others have incorporated the Southern Transportation Co., with a capital stock of \$250,000; purpose, to operate steamship lines, erect wharves, warehouses, etc.

Kyle—Oil Mill.—The Kyle Oil Co. is making repairs and improvements to its mill.

Sherman—Water System.—The city council has authorized the extension of water mains 14,000 feet. Address the mayor.

Sherman—Water Extensions.—The city council has let contract to C. W. Alcott for laying about 1400 feet of additional mains, etc.

Waco—Electric Lighting.—The city council has adopted a resolution and appointed committee to devise plans for establishing an electric-light system. Address the mayor.

Waco—Cotton Mill.—H. J. Olney, of Chicago, Ill., is reported as arranging for the erection of a 10,000-spindle mill in Waco.

Winnboro—Lumber Mills.—The W. G. Ragley Lumber Co. has been incorporated, with a capital stock of \$50,000, to manufacture lumber.

VIRGINIA.

Alexandria—Telephone Company.—The United States Telephone & Telegraph Co. has been incorporated, with a capital stock of \$1000. F. B. Hubbell is president, and W. J. Atkinson, manager. Gardner L. Booth is said to be the agent in Alexandria.

Fredericksburg—Ice Plant.—John O. Brummett will establish an ice plant; machinery has been purchased.

Lynchburg—Manufacturing.—The Stanford Manufacturing Co., of New York, will establish a plant in Lynchburg.

Newport News—Woodworking Company.—The Joo Combination Ironing Board Co. has been organized by Morris Joo and others.

Norfolk—Real Estate.—The Atlantic City Water Front Co. has been incorporated with a capital stock of \$40,000 to deal in real estate; E. S. Ruffin, president; W. F. B. Slaughter, secretary-treasurer.

Norfolk—Telephone System.—The Southern States Telephone Co., of Baltimore, Md., which was recently incorporated, will establish a telephone system in Norfolk; system will be an underground metallic circuit telephone service, and over 700 subscribers have been secured. Charles E. Fink, of Westminster, Md., is president; T. C. Thomas and J. D. Mason, of Baltimore, and others, directors; capital stock \$200,000.

Pocahontas—Electric-power Plant.—The Southwest Virginia Improvement Co. is putting in its machine shops an extensive electric-power plant.

Roanoke—Bag Factory.—G. P. Ellason contemplates erecting a tobacco-bag factory.*

WEST VIRGINIA.

Fairmont—Bridge.—Plans for a bridge 250 feet long are said to have been prepared by Perry Thompson.

Welch—Electric Plant, etc.—The Flat-Top Central Electric Power Supply & Traction Co. will be organized, with capital stock placed at \$500,000. Isaac T. Mann, L. E. Tierney and others are interested.

Wheeling—Hat Company.—J. P. McCammon and others have incorporated the Wheeling Hat Co.

Wheeling—Oil Wells.—The Hamilton Oil Co. has been incorporated for the purpose of drilling for oil by James A. Davidson and others.

BURNED.

Heaters, W. Va.—The lumber plant of W. B. Pettit & Co.; loss about \$50,000.

Kentwood, La.—The Kentwood Lumber Co.'s box factory; loss \$5000.

Lakeside, La.—The Hotel Lakeside.

Mobile, Ala.—Jordan Lumber Co.'s mill damaged by explosion.

San Mateo, Fla.—The Clark Lumber Co.'s planing mill; loss \$6000.

St. Gabriel, La.—The depot and warehouse of the Yazoo & Mississippi Valley Railroad; B. Marion, supervisor buildings, Vicksburg, Miss.

Buildings Damaged at St. Louis.

In this issue the Manufacturers' Record publishes a list, which has been revised as carefully as possible, of the principal structures injured or destroyed by the tornado in St. Louis, in connection with the names of the companies or individuals owning them or to whom letters of inquiry may be addressed:

City Hospital.—Health Commissioner Starkloff.

Power-house of Lindell Railway Co.—E. Whitaker, president.

Factory.—C. H. Sawyer Manufacturing Co., 1819 Chouteau avenue.

City Jail.—Hon. C. P. Walbridge, mayor's office, City Hall.

St. Louis Refrigerator & Wooden Gutter Co.'s plant.—Address the company, South Fourth street.

Aluminum Bicycle Factory.—Address St. Louis Refrigerator & Wooden Gutter Co.

Portion of the Eads Bridge (masonry and metal work).—Address the Eads Bridge Co.

Merchants' Exchange Building.—President of the Merchants' Exchange.

Alms-house.—Superintendent of the Alms-house, at City Hall.

Gates Wire Mill Co.—Twenty-first street.

Printing Office.—Eden Publishing Co., 1716 Chouteau avenue.

Building of Brown Tobacco Co.—Chouteau avenue.

Merchants' Elevator.—Merchants' Elevator Co.

Foundry Building.—Filley Foundry Co.

Freight-house.—General superintendent Chicago, Burlington & Quincy Railroad.

Factory.—Allen Buggy Co., Mullanphy street.

Bottling Plant.—Enno Sanders, Eleventh street.

Warehouse.—Martin Lammert, Walnut street.

Factory.—St. Louis Stamping Co., Second street.

Warehouse.—E. F. Seidel, 210 South Broadway.

Warehouse.—Cross, Blackwell & Kelly, Second street.

Warehouse.—Berry-Horn Coal & Cement Co., Main street.

Telegraph Systems.—Western Union Telegraph Co., Postal Telegraph Co., Fire Alarm Telegraph Co.; also wires and poles of the St. Louis Electric Light Co. Address the superintendents of each company.

Carsheds.—Lindell Railway Co., E. Whitaker, president.

Power-house.—People's Railway Co., Chas. Green, president, Eighteenth street.

Factory.—Dobson-Hill Pickle Manufacturing Co., 732 West Second street.

Grain Elevator.—St. Louis United Elevator Co., Chouteau avenue.

Soap Factory.—N. K. Fairbanks Co., Third street.

City Gas Works, Chouteau avenue.—Address the superintendent.

Warehouse.—Becker & Co., South Broadway.

Gas Plant.—Laclede Gas Light Co., Fifteenth street.

Brewery.—Lemp Brewing Co.

Brewery.—Anheuser-Busch Brewing Co., Church of St. Peter and Paul, Seventh street.—Address the pastor.

St. Peter's Church, Ninth street.—Address the pastor.

Factory.—Haydock Carriage Co., Seventh street.

Bohemian Church, Eleventh street.—Address the pastor.

Factory.—Brown Oil Co., Plum street.

Elevator.—Plant Milling Co., South St. Louis.

Warehouse and Depot.—St. Louis, Iron Mountain & Southern Railroad Co., W. B. Doddridge, general manager.

Elevator.—Standard Elevator Co.

Factory.—American Refrigerator Co.

Flour Mill.—Regina Milling Co.

Building.—Bridge, Beach & Co., South St. Louis.

Factory.—St. Louis Ice Manufacturing Co., South St. Louis.

Cotton Compress.—St. Louis Cotton Compress Co.

Factory.—Waters-Pierce Oil Co., Fourteenth street.

St. John's Episcopal Church, Hickory street.—Address the pastor.

Warehouse.—Wm. Ottenhan, 1700 South Broadway.

Power-house and sheds.—Union Depot Railway Co., Jefferson street; also cars destroyed.

Building.—Union Club, South St. Louis.

Mt. Calvary Episcopal Church, Jefferson avenue.—Address the rector.

Lafayette Park Methodist, Presbyterian and Baptist Churches.—Address the pastors.

Factory and Warehouses.—Inland Oil Co., La Salle street.

Several of the City Schools.—Address secretary of the school board.

Tobacco Factory.—Liggett & Myers Tobacco Co.

Factory.—Blackmer-Pipe Pipe Co., Arsenal street.

Fire-engine House No. 7, Eighteenth street.—Address board of fire commissioners.

East St. Louis. (Postoffice.)

Roundhouses.—Wabash Railroad, Chas. M. Hays, general manager, St. Louis.

Buildings.—Terminal Railroad Association of St. Louis, A. Brown, vice-president, St. Louis.

Rolling Stock.—Mobile & Ohio Railroad Co., H. W. Clark, superintendent, East St. Louis.

BUILDING NOTES.

Atlanta, Ga.—Synagogue.—The trustees contemplate the erection of a new synagogue, to cost about \$45,000. Address Aaron Blumenthal, trustee, 371 Whitehall street.

Austin, Texas.—Theatre.—The Millett Opera House will be remodeled after plans now being prepared by A. O. Watson. Equipment for modern theatre will be purchased. Bids will be wanted on erecting building. Address Dr. M. A. Taylor, care of J. W. Phillips, Austin.

Baltimore, Md.—Hall.—The Fraternal Trust & Banking Co., with a capital stock of \$100,000, intends to erect a hall. Address care of James Young.

Charleston, S. C.—Hall.—Henry Haesloop and others have incorporated the Pythian Hall Co. to build a hall.

Charlotte, N. C.—Mercantile Building.—J. W. Hunt will erect a mercantile building two stories high.

Charlotte, N. C.—College.—A proposed Lutheran College will be located at Charlotte; buildings to cost from \$50,000 to \$75,000 will be erected. Revs. C. L. Fisher and C. B. King, Salisbury, N. C., trustees, can be addressed.

Columbia, S. C.—Casino.—Niernsee & Lamotte have prepared plans for a casino, to be erected by the Columbia Electric Railway Co., to cost \$6000.

Cuthbert, Ga.—Stores.—F. M. Allison and A. M. Sawyer have placed contracts for the erection of brick stores.

Elkton, Md.—School.—C. W. Wilson, of Rising Sun, has contract for the erection of school at \$7250.

Fort Worth, Texas.—Depot.—A new union depot will be probably built to replace one just burned. L. S. Thorne, general manager Texas & Pacific Railroad, Dallas, Texas, can be addressed.

Georgetown, Texas.—Asylum.—There is talk of the erection of an asylum for orphans, to cost \$10,000. Address Rev. Abe Mulkey.

Hagerstown, Md.—Asylum.—Plans submitted by J. A. Hunter have been accepted for a 45-room addition, to cost \$10,000, to Bellebue Asylum. Address the county commissioners.

Jackson, Tenn.—School.—The city has definitely decided to build the school building recently noted. It is to cost about \$20,000. Address the mayor.

Jacksonville, Fla.—Schools.—The school

board has decided to expend \$6000 on schools and repairs.

Lenoir, N. C.—Jail.—The county commissioners will contract for erection of a jail in the near future.

Marietta, Ga.—Warehouse.—The Marietta Paper Co. will erect a warehouse.

Montgomery, Ala.—Grief Bros. have purchased site on which to erect a large mercantile building.

Montgomery, Ala.—Depot.—The Louisville & Nashville Railroad Co. has made a proposition to the city for the erection of a \$300,000 depot; J. G. Metcalfe, general manager of company, Louisville, Ky.

New Orleans, La.—Dwellings.—P. B. Acker has permit for erection of two-story frame building to cost \$6000, and J. J. Owen for two-story frame cottage to cost \$2200.

New Orleans, La.—The Louisiana Molasses Co. has obtained permit to erect a four-story brick building to cost \$13,442.

New Orleans, La.—Permits have been issued to J. B. Cefalu for a two-story frame cottage to cost \$6100, to the Josephine Louise Home for repairs to cost \$5000, and to St. Vincent's Orphan Asylum for repairs to cost \$4500.

Newport News, Va.—Schools.—The school trustees contemplate the erection of two schools at a cost of \$40,000. Address secretary trustees.

Ocean City, Md.—Hotel.—Daniel Trimper will erect, it is stated, a hotel.

St. Louis, Mo.—Hospital.—The city contemplates the erection of a new hospital. Address the mayor.

Temple, Texas.—School.—Bonds for \$5500 will be issued to build a school. Address the mayor.

Tifton, Ga.—Store.—John Murrow has contracted for the erection of a large two-story store building.

Timonium, Md.—Hotel.—It is contemplated to form a company to erect a hotel near Timonium. R. A. McCormick, of Baltimore, can be addressed.

Washington, D. C.—Dwellings.—Building permits have been issued to Mrs. J. S. Ward for \$10,000 dwelling; to Ida V. Doyle for dwelling to cost \$8000.

Washington, D. C.—Station.—Jackson C. Gott, of Baltimore, Md., has prepared plans for a new station for police department. Address the District commissioners.

RAILROAD CONSTRUCTION.

Steam Railways.

Baltimore, Md.—The Atmospheric Railway & Power Co. may build 1000 feet of line to test a new air motor. A Leslie Duvall is engineer of the company. William H. Bosley is also interested.

Charleston, S. C.—It is reported that the Security Construction Co. has arranged with W. B. Strang, Jr., & Co., 15 Wall street, New York, to build a line from Charleston to connect with the Greenwood, Anderson & Western at Allendale, S. C., eighty miles long. If Charleston people will take \$320,000 in bonds of the company.

Hendricks, W. Va.—The Hendricks, Gladly & Covington Company has been chartered to construct a line from Hendricks to Alleghany, Va. The charter directors are A. H. Harper, Sr., J. E. Poling, John W. Moore, James Hamill and Thaddeus Harper, of Hendricks. The distance is about forty-five miles. [This line would connect the Chesapeake & Ohio and the West Virginia Central.—Ed.]

Hinton, W. Va.—Director Azel Ford, of the Beatty Lumber Co., writes the Manufacturers' Record that the narrow-gauge line it is building will be ten miles long. It is now under construction, to be completed by August 1. The road extends from Glade Station, on the Chesapeake & Ohio, up Glade Creek valley.

Jefferson, Texas.—The project of constructing the Vicksburg, Shreveport & Pacific from Waskom, its present terminus, to connect with the Missouri, Kansas & Texas at Jefferson, has been revived. It would give the Missouri, Kansas & Texas an extension to Shreveport, La. C. C. Horrey is general manager at New Orleans, La.

Norfolk, Va.—It is stated that arrangements are being made to change the Norfolk, Albemarle & Atlantic road from narrow to standard gauge and to extend it further into Princess Anne county. Its present length is eighteen miles. B. P. Holland, at Norfolk, is superintendent.

Opelika, Ala.—A director of the La Fayette Railway Co. advises the Manufacturers' Record that the road is to be twenty-two

miles long. Grading is completed and track for thirteen miles. It is hoped to complete it by September 1. G. E. McGhee, of La Fayette, is president, and J. R. McGhee, of Opelika, manager.

Paris, Texas.—The citizens of Paris have guaranteed to give the Texas Midland Company \$30,000 and right of way if the road is extended to Paris. It is stated work will begin in the near future. E. H. R. Green, at Terrell, is president.

Pineville, Ky.—The Exporting Cannel Coal Co. has begun surveying a road fourteen miles long to coal beds they own in Knox county near Flat Lick.

Rugby, Tenn.—The Rugby & Cumberland River road has been chartered, to extend from Rugby, on the Cincinnati Southern, to the Cumberland river through Fentress and Overton counties. The distance is about fifty miles.

Terrell, Texas.—Prest. E. H. R. Green, of the Texas Midland, has let the contract for extending the line from Commerce to Paris.

Electric Railways.

Greenville, Miss.—J. A. Gaboury, manager of the Greenville Light & Car Co., advises the Manufacturers' Record that the company will construct the proposed trolley line itself.

Hopkinsville, Ky.—The Southern Construction Co., in which W. R. Vaughan, of Bowling Green, Ky., and others are interested, has been organized and may build an electric road between Hopkinsville and Clarksville, Tenn., twenty-five miles.

New Orleans, La.—A. G. Tebo, T. Hart, A. A. Castaneda and others are interested in a project to build an electric line on Napoleon avenue into the suburbs.

Ocean City, Md.—Edward Stabler, Jr., of the Guardian Trust Co. of Baltimore; Wm. J. Warrington and others have formed the Steel Pier & Atlantic Railway Co. They propose building an electric line and a steel pier at Ocean City. The capital is \$50,000.

Pocahontas, Va.—It is reported that a company, to be known as the Flat-Top Central Electric Power Supply & Traction Co., will build a trolley line from Pocahontas to Newwood. L. E. Tierney, Isaac T. Mann, A. R. Paddock and B. F. Keller are interested.

Tampa, Fla.—The Consumers' Railway Co. has begun work on the extension of its trolley line into the suburbs. The superintendent is John T. Douglass.

Wheeling, W. Va.—The Suburban Railway Co. is considering the extension of its road to the town of Alexander, on the Pennsylvania boundary. The distance is nine miles. Gilmore Brown is engineer, and Anton Reymann one of the directors.

Machinery, Proposals and Supplies Wanted.

Manufacturers and others in need of machinery of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery needed we will make their wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. The MANUFACTURERS' RECORD has received during the week the following particulars as to machinery that is wanted.

Air Compressor.—James & Co., Chattanooga, Tenn., want to buy an air compressor, either new or second-hand; size of cylinder about 12x16; to be large enough to run four No. 2 air drills.

Bag Machinery.—G. P. Ellison, Roanoke, Va., wants to buy machinery for cutting out tobacco-bag patterns.

Bark Mill.—See "Tannery Outfit."

Bobbin and Spool Machinery.—See "Woodworking Machinery."

Bobbins and Shuttles.—See "Woodworking Machinery."

Boiler.—The San Angelo Electric Light Co., San Antonio, Texas, wants to buy a 100 horse-power boiler; state specifications and estimate.

Boiler.—A. R. Roberts, Ogeechee, Ga., wants a twenty-five or thirty-five horse-power stationary tubular boiler complete.

Boiler and Engine.—See "Stone Crusher."

Boiler and Engine.—The Acme Safe Co., Chattanooga, Tenn., wants one forty or fifty horse-power boiler and engine.

Boilers and Engines.—The Marsden Cellulose Co., Owensboro, Ky., has invited bids

for a 250 horse-power engine and three boilers of 100 horse-power each.

Bottling Plant.—The Santa Monica Co. wants to negotiate for bottling plant, including carbonating machines; H. B. Beck, manager, Austin, Texas.

Bridge.—Sealed proposals will be received until June 22 for the construction of a highway bridge across the Arkansas river at Little Rock, Ark.; cost will be over \$100,000. Address J. A. Woodson and W. W. Dickinson, commissioners.

Bridges.—The county commissioners, Morganton, N. C., will contract in the near future for two iron bridges across Catawba and John's rivers.

Cotton Gins.—George Giles & Co., Ocala, Fla., will buy several staple cotton gins.

Cotton-mill Machinery.—The Cherokee Falls Manufacturing Co., Blacksburg, S. C., will soon be in the market for 4800 spindles and an adequate amount of preparatory machinery; also 400 looms; J. C. Clark, superintendent.

Cottonseed Machinery.—George Giles & Co., Ocala, Fla., will buy machinery for crushing cottonseed.

Crushing Machinery.—See "Stone Crusher."

Distillery.—R. P. Johnson, Wytheville, Va., wants addresses of manufacturers of stills for distilling whiskey from grain.

Dry-kilns.—The Acme Safe Co., Chattanooga, Tenn., wants dry-kiln machinery of 30,000 to 40,000 feet capacity; Smith or Sturtevant make.

Electric-light Plant.—The city of Kinston, N. C., will contract for lighting by electricity with twenty-five 2000 candle-power lamps. Address the mayor.

Engine.—The Milledgeville Oil Co., Milledgeville, Ga., wants to buy a good second-hand Corliss or automatic engine, 100 horse-power. Give maker's name, size of cylinder, how long used, lowest price delivered, etc.; H. H. Camp, manager.

Fire Apparatus.—Sterrett Tate, Pensacola, Fla., wants to correspond with makers of steam fire engines.

Furniture Machinery.—See "Woodworking Machinery."

Furniture Machinery.—See "Woodworking Machinery."

Grist Mill.—George Giles & Co., Ocala, Fla., will buy grist mill.

Iron Founders.—J. M. Camp, Box 215, Cartersville, Mo., wants to contract for the manufacture of a patent railway joint made of cast iron.

Machine Tools.—The Block-Pollak Iron Co., Cincinnati, Ohio, wants to buy second-hand back-gear upright drill press, twenty-eight to thirty inches; 36-inch planer, 10-foot bed; double-acting axle-turning lathe for rough turning wheel fits and journals, to take large 60,000 M. C. B. axles, and pipe cutter for one-quarter to four-inch pipes.

Machine Tools.—The Vulcan Road Machine Co., Charles Town, W. Va., is in the market for a new or second-hand iron planer.

Oil Mills.—The Sumter Cotton Oil & Fertilizer Co. wants to contract at once for the erection of a 30-ton cottonseed-oil mill, costing about \$18,000. Address care of the A. C. Phelps Co., Sumter, S. C.

Paper Machinery.—George C. Selman, Atlanta, Ga., wants machinery for manufacturing all kinds of paper.

Pipe.—P. O. Box 280, Atlanta, Ga., wants 2000 feet of second-hand water pipe, two-inch.

Pump.—See "Wind Mill."

Railway Equipment.—The Glade Creek & Raleigh Railroad will want about five miles of 35-pound rails, with fishplates, bolts, etc. Address care of Azel Ford, Hinton, W. Va.

Roofing.—The Gastonia Tanning Co., Gastonia, N. C., wants roofing, cheap and durable.

Shingle Mill.—C. M. Peery, Stephens City, Va., wants a shingle mill, new or second-hand. Address with price and capacity.

Stone Crusher.—Wanted, a second-hand stone crusher and portable engine and boiler, together or separate. Address H. 91, Sun Office, Baltimore, Md.

Tannery Outfit.—The Gastonia Tanning Co., Gastonia, N. C., will want a bark mill.

Telephone Equipment.—The Jasper Telephone Exchange, Jasper, Ala., (to be organized) will buy equipment.

Telephone Equipment.—C. W. Richter, Milledgeville, Ga., will need new phones and other equipment; also wants some wet batteries at once.

Wind Mill.—Stewart Philizy, Groveton, Ga., wants the latest improved wind mill, to pump water seventy-five to 100 feet high; pump wanted also.

Wire Netting.—Sterrett Tate, Pensacola, Fla., wants to correspond with manufacturers of wire netting for door and window screens.

Woodworking Machinery.—H. V. Urnkall, Jacksonville, Ala., wants machinery for making bobbins and spools.

Woodworking Machinery.—T. W. Belsher, care of Anniston Cordage Co., Anniston, Ala., wants machinery for making bobbins and spools.

Woodenware Machinery.—The Kentucky Pail & Tub Co. wants to buy a full line of machinery for making woodenware, etc. Address Evert Thompson, Indianapolis, Ind.

Woodworking Machinery.—H. A. Brintnell, Childersburg, Ala., wants machinery for manufacturing bobbins and shuttles.

Woodworking Machinery.—J. L. Turner, North Wilkesboro, N. C., wants to buy furniture machinery, new or second-hand.

Woodworking Machinery.—The Acme Safe Co., Chattanooga, Tenn., wants the following machinery: Furniture planer, single surfacer, twenty-four to thirty inches; hand saw, hand jointer, twelve to sixteen inches; resaw machine, 24-inch saw; double cut-off saw, mortising machine, six-foot dado machine, bed clamp, iron top double spindle shaper, tenon machine, three drum sand machine, twenty-four to thirty inches; swing cut-off saw, bed routing machine, pony planer, two rip saws, wood-top tables; above to be second-hand, in good working order; state price, make and condition.

TRADE NOTES.

A poster showing late types of woodwork and cooperage machinery has been issued by the E. & B. Holmes Machinery Co., Buffalo, N. Y.

H. G. McKerrow & Co., of 31 State street, Boston, Mass., have recently installed a line of Messrs. Tweedales & Smalley's improved speed frames in the new mill of the Birmingham Cotton Manufacturing Co., Birmingham, Ala.

In the advertising columns will be found an opportunity to purchase a Southern cotton mill at a low figure. The mill is three years old and thoroughly organized, and can be turned over in this condition to purchaser. It contains 3000 spindles and 200 looms, with space for about 3000 additional spindles and 100 looms. Thirteen acres of valuable land and twenty-eight tenement houses are included. It is located beyond the limits of a city of about 20,000 inhabitants; now in successful operation, running full time, and making well-established brands of colored cotton goods.

The Peck-Hammond Co., Cincinnati, Ohio, manufacturer of heating, ventilating and sanitary apparatus, is known well and favorably throughout the Southern States, and its system is being adopted in the largest buildings in the South. Among recent contracts which it has secured are for a new school to be built at Kosciusko, Miss., two churches at Charlottesville, Va., and the residence of Mr. Wm. M. Johnson at Macon, Ga., and one of the largest stores at Montgomery, Ala. Mr. J. F. Barnes, contractor for building the Harmony Club House at New Orleans, has let the contract for heating this building to the Peck-Hammond Co. as well.

The Chicago Flexible Shaft Co., of 142-144 Ontario street, Chicago, has issued a catalogue covering the different forms of the Chicago flexible shafting, of which it is the manufacturer. This company also carries a full line of tools and machinery to be operated with the shafts. These shafts are used for finishing dies, grinding, polishing, brushing on heavy castings, or other large work, for drilling or tapping large or small holes or running small tools used in pattern or model making, for glassworkers, stone-cutters, machinists, woodworkers, carriage builders and other branches of trade. The catalogue, which contains seventy-two pages, will be sent upon application.

Much attention was attracted at the New York Electrical Exposition by the operative exhibit of the J. H. McEwen Manufacturing Co. This display consisted of a 40-kilowatt Thompson-Ryan multipolar generator, direct connected to a 10x10 McEwen engine. Its compactness, pleasing outline and smooth running drew many complimentary remarks from visitors, and in order to satisfy those who were interested from a practical standpoint, a water rheostat was provided, so that any desired load up to 50 per cent. beyond the rated capacity of the dynamo could be thrown on or off at will. The normal capacity of the dynamo was 320 amperes at 125 volts, and the test of throwing on and off 450 to 475 amperes instantly, with

absolutely no sparking and without racing of the engine, was a surprise to witnesses of the tests. Catalogues describing these machines have been issued by the company, whose address is 25 Cortlandt street, New York city.

The Christy Fire Clay Co., of St. Louis, announces that it escaped with but little damage from the recent tornado, and has sent out the following statement: "We are ready to receive orders for the celebrated Christy washed clays and for all refractory material used in the manufacture of glass. The principal damage we sustained was to some material in course of construction. This we can replace with but little delay." Those who have been so fortunate as to be patrons of the Christy Company are familiar with the excellence of its grades of clays, and will congratulate the company that it will be enabled to continue to meet the extensive demands of its trade.

The Carnegie Steel Co., nearly two years ago, being favorably impressed with the design of the Cahall vertical water-tube boiler, made an investigation as to its merits, resulting in the installation of a trial plant of three boilers, of 2000 horsepower, at the company's gas-pumping station at Bagdad, Pa. The performance of the boilers at Bagdad showed such a marked improvement over the general boiler practice that about a year later four of these boilers were put in at its Edgar-Thomson Steel Works. This plant was carefully watched and tested under varying conditions, and the company has been so well satisfied with the work done by these four that arrangements have been made to tear out all the old-style boilers of furnaces A, B and C at the Edgar-Thomson Steel Works. They will be superseded by 5250 horsepower of the Cahall vertical water-tube boilers, which will be installed at these furnaces in place of the ones to be removed. H. E. Collins & Co., Pittsburg, Pa., are introducing the Cahall boiler.

Inquiries for flour-mill machinery show that this industry is in an active state of development. The movement towards modern methods continues to broaden, and sales of improved equipment show that millers are alive to the requirements of the times. Recent orders closed by Sprout, Waldron & Co., Muncy, Pa., strongly illustrate this activity. A list of such orders is as follows: Moravian Falls Milling Co., Moravian Falls, N. C., wheat-mill equipment; Turner & Wyatt, Wilkesboro, N. C., wheat-mill equipment; D. Kavanaugh, Williamsport, Pa., receiving separator, 12-inch feed mill and supplies; C. A. Dorney, Allentown, Pa., 20-inch feed mill; Saeger Milling Co., Allentown, Pa., 24-inch interchangeable feed mill; H. C. Russell, Laconia, Ind., 20-inch feed mill; W. W. Powers, Shopiere, Wis., cob crusher; Cohn Bros., Lee, Miss., corn sheller; B. F. Starr & Co., Baltimore, Md., two 12-inch feed mills; Stimpson & Steele, Turnersburg, N. C., meal sieve, elevator cups and supplies; R. M. McMillen & Co., Piedmont, W. Va., 30-inch feed mill and meal sieve; Blank & Gottshall, Sunbury, Pa., conveyor with knuckle coupling and supplies; T. L. Jennings & Son, Jennings, N. C., wheat scourer; E. H. Deats, Pittsboro, N. J., 20-inch interchangeable feed mill, wheat screen, elevator cups, belting, etc.; Capitol City Supply Co., Indianapolis, Ind., 12-inch feed mill, 16-inch feed mill and 20-inch feed mill; Chautauqua Cement Co., Burnhams, N. C., 16-inch interchangeable mill and crusher for grinding dry clay; Crane-Hinman Hardware Co., Yazoo City, Miss., 12-inch feed mill; Greer Machinery Co., Knoxville, Tenn., two 12-inch feed mills; Merrell Buggy, Implement & Seed Co., Toledo, Ohio, 20-inch feed mill; Hanover Foundry & Machine Co., Hanover, Pa., 20-inch interchangeable mill; Lauer & Co., Reading, Pa., 20-inch mill, combined with crusher and elevator; Munger Improved Cotton Machine & Manufacturing Co., Dallas, Texas, 24-inch corn mill, 20-inch corn mill, elevator heads and boots, elevator cups, fan, portable platform scales, bag trucks and 9x30 reel; A. J. Tracy Co., New York city, N. Y., 7x26 reel for export; McLanahan & Stone, Hollidaysburg, Pa., elevator head, conveyor and supplies; Union Iron Works, Selma, Ala., No. 2 crusher, elevator and supplies; Dr. Orville Nalle, Elkwood, Va., 12-inch feed mill, No. 1 crusher, elevator and supplies; L. M. Bates & Co., Philadelphia, Pa., 16-inch feed mill, No. 1 crusher; L. C. Hay, Martinsburg, Pa., 12-inch feed mill; J. W. Holderbaum, Somerset, Pa., 16-inch feed mill; Chas. A. Rogers, Pont, Pa., No. 2 crusher; W. O. McKeown & Son, Cornwell, S. C., 20-inch feed mill; Amos M. Thomas, Erie, Pa., 20-inch feed mill, No. 2 crusher; Miller Henderson, Waterford, Pa., 20-inch feed mill; Randall Machine Co., Cincinnati, Ohio, No. 2 crusher and elevator; H. A.

Johnson & Son, Ashland, Ohio, No. 1 crusher; Fairfield Oil & Fertilizer Co., Willsboro, S. C., 30-inch improved oilcake mill with force feed; C. K. Williams & Co., Easton, Pa., 30-inch rock emery mill, with independent pedestal; Aton & Emech, Lime Ridge, Wisc., 20-inch feed mill; Cardwell Machine Co., Richmond, Va., 30-inch mill for grinding oilcake; Dublin Oil Mill Co., Dublin, Texas, 30-inch double pedestal ball-bearing mill.

TRADE LITERATURE.

An examination of the catalogue of Jeffrey coal-mining machines and mine equipments reveals the wonderful progress made in methods applied to mineral developments. The hand miner steps aside before the powerful automatic machinery which, working with human intelligence, performs the labor of many hands. Compressed air and electricity have worked a revolution in mining. Coal cutters, coal-mining machines, drills, hoists, pumps, conveying apparatus, ventilating fans and other equipment are now driven with great economy by either one of these powerful agents. The Jeffrey Manufacturing Co., Columbus, Ohio, has achieved a notable success in the production of this class of machinery, and its latest catalogue indicates that it is constantly alive to the improvements of its already well-perfected equipment.

Few points in the equipment of a power plant are more generally valued by the expert than durable, efficient and smooth running belts. A revised catalogue of oak-tanned leather belting has been issued by J. E. Rhoads & Sons, of Wilmington, Del. This concern is a leader, and the new edition of its catalogue is of general interest to the trade. Improvements have been made in its facilities, and its stock of rubber goods and other supplies has been enlarged, ensuring prompt shipments. Progressive improvement in methods and facilities of manufacture, and the lessons learned from mistakes, as well as successes, have contributed to make the output of this firm of the highest standard. A well-equipped plant, skillful workmen and long experience in the processes of manufacture are conditions which command success.

The users of steam power throughout the United States, owing to its extensive adoption, are generally familiar with the manifold advantages of the vacuum system of steam heating. The original patent or foundation of the system is now owned by Warren Webster & Co., Camden, N. J., and after having been subjected to exceptional litigation, no question exists as to the strength and validity of its claims, as a number of decisions have been rendered in the United States courts sustaining it in every case. A catalogue issued by this firm shows this system as perfected, whereby thorough control is secured, as well as the more economical and efficient use of exhaust or live steam for heating and drying purposes. The advantages of this system will be readily seen by the practical man, as the catalogue reviews the question in a clear and instructive style.

The Fitchburg's Tourist Book.

This is the season for the issuing of summer tour books by railroad companies. We have seen few which are as interesting as that published by the Fitchburg Railroad, on which is located the famous Hoosac tunnel. J. R. Watson, the general passenger agent at Boston, has prepared a list of over 200 routes reached by the Fitchburg, which afford many attractions to the vacation-seeker or the traveler. They are accompanied by explanations of the route, and give the railroad fare, hotel and boarding-house rates and other necessary statistics. Included is also a list of good hotels and boarding-houses, together with the prices and location. The book is well illustrated by half-tone engravings taken from photographs of scenery adjacent to the Fitchburg line. As is well known, this railroad passes through one of the most picturesque regions of the United States. The mountains in Vermont and between New York State and New England form a favorite resort for thousands of summer sojourners from all parts of the country, and the enterprise of the railroad company in thus publishing a description of this section will doubtless be highly appreciated.

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Steam Yachts and Marine Machinery
Built by Marine Iron Works, Clybourn and Southport avenues, Chicago. Free illustrated catalogue. Write them for it. †

The *Southern States* magazine is read by thousands of farmers, fruit-growers, stock-raisers and business men in all the North, West and Northwest, who are looking to the South as a future home and are trying to inform themselves as to the relative advantages of different parts of the South. If you have farm, garden or orchard property for sale the *Southern States* will put you into communication with buyers. Send for sample copy and rates. Manufacturers' Record Publishing Co., Baltimore, Md.; Wm. H. Edmonds, editor and manager.

Reduced Rates to Washington.

The Young People's Society of Christian Endeavor will hold their Annual Meeting in Washington, D. C., July 7 to 13. For this occasion the B. & O. R. R. Co. will sell tickets from all points on its lines East of the Ohio River to Washington at one single fare for the round trip, July 6 to 8, inclusive; valid for return passage until July 15, inclusive, with the privilege of an additional extension until July 31 by depositing tickets with Joint Agent at Washington. Tickets will also be on sale at stations of all connecting lines. Delegates should not lose sight of the fact that all B. & O. trains run via Washington.

A Handsome Book on Summer Travel.

The Baltimore & Ohio R. R. Co. has just issued a handsome book descriptive of the various summer resorts in the mountains and by the seaside, adjacent to or reached by its system of lines. It is finely printed and illustrated by a number of very fine cuts. Send ten cents to Chas. O. Scull, general passenger agent, Baltimore, Md., for a copy.

Saturday and Sunday Trips to the Country.

Commencing Saturday, May 30, and continuing until further notice, the B. & O. R. R. Co. will sell excursion tickets, at rate of one fare for the round trip, for regular trains of Saturday and Sunday, to points on the main line between Baltimore and Washington Junction; to points on Washington Branch between Baltimore and Laurel. Tickets will be valid for return passage on regular trains until the Monday following the date of sale.

Republican National Convention.

Reduced Rates to St. Louis via Pennsylvania Railroad.

For the Republican National Convention, to be held at St. Louis, Mo., June 16, the Pennsylvania Railroad Co. will sell on June 12, 13, 14 and 15 excursion tickets to St. Louis and return at \$21 for the round trip.

These tickets will be good for return passage until June 21, inclusive.

The Pennsylvania is the standard railroad of America.

Reduced Rates to Pittsburg via Pennsylvania Railroad.

The Central Board of the North American Saengerbund will meet at Pittsburg, Pa., from June 8 to 12.

For this occasion the Pennsylvania Railroad Co. will sell from June 6 to 8 excursion tickets from all points on its system to Pittsburg and return at \$8 for the round trip.

The tickets will be good for use on all trains (except the Pennsylvania Limited) going June 6, 7 and 8, and for return passage until June 13, inclusive.

Friday and Saturday Excursions to the Seashore via Pennsylvania Railroad.

Commencing June 5 and continuing each Friday and Saturday until August 29, inclusive, excursion tickets will be sold from Baltimore to Atlantic City, Cape May and Sea Isle City for trains leaving Union Station 10.55 A. M. and 12.05 noon at the low rate of \$1 for the round trip, including transfer of passenger through Philadelphia in each direction. Tickets good for return until following Tuesday, inclusive, and permitting stop-off at Philadelphia without limit on return trip.

Summer Vacation Tours.

The Baltimore & Ohio R. R. Co. now has on sale at all its offices east of the Ohio river a full line of tourist excursion tickets to all the lake, mountain and seashore resorts in the Eastern and Northern States and in Canada. These tickets are valid for return journey until October 31. Before deciding upon your summer outing it would be well to consult the B. & O. book of "Routes and Rates for Summer Tours." All B. & O. ticket agents at principal points have them, or they will be sent upon receipt of ten cents, for postage, by Chas. O. Scull, general passenger agent B. & O. R. R., Baltimore, Md.

Increased Train Service to Pittsburg and the West via the Pennsylvania Railroad.

To accommodate the demand for additional train service between Baltimore and Pittsburg and the West, the Pennsylvania Railroad placed in service, Sunday, the 17th inst., daily express train service, leaving Baltimore week days 8.50 A. M. and Sundays 8.15 A. M., arriving in Pittsburg 6.20 P. M. same day, and making connection for Chicago, Louisville, Cincinnati and St. Louis. This train will afford passengers an opportunity of viewing the beauties of the Alleghenies in daylight, arriving in Chicago the following morning 8 A. M., Louisville 11.45 A. M., Cincinnati 6.40 A. M. and St. Louis 3.10 P. M., with parlor car Philadelphia to Pittsburg and sleepers to the various points beyond.

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